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LECTURES
ON THE
THEORY AND PRACTICE OF MEDICINE;
NOW IN COURSE OF DELIVERY AT THE
THEATRE OF ANATOMY AND MEDICINE, WEBB-STREET, SOUTHWARK.
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&c., &c.

DISEASES OF THE CIRCULATING SYSTEM.—*Physiology of the heart. The pulmonic and systemic hearts. Explanation of the sounds of the heart. Tabular view of diseases of the heart. History, signs, and termination of cardiac complaints in general. Effects of remedies. Hypertrophy; dilatation. Carditis and pericarditis. Endocarditis. Diseased valves. Aneurysm of the aorta. Symptomatic affections of the heart.*

GENTLEMEN:—I must now introduce to you a new and interesting subject, that of

THE DISEASES OF THE CIRCULATING SYSTEM.

I shall take this opportunity, too, of illustrating the remark with which I commenced a former lecture (see p. 177), that in teaching the *Theory and Practice of Medicine* I am persuaded that we ought to begin with a sketch of the *anatomy* and *physiology*, and proceed to the *pathology*, in its relation both to *function* and to *structure*; the *therapeutics* must be strictly adapted to the precise condition of the *disorder* or *disease*.

I have already shown that it induces an erroneous impression if we speak of the circulation of the blood, as double, pulmonic and systemic. I will now enter into the subject more particularly.

In the first place, the heart certainly consists, in reality, of *two* organs united together, and we may, with great propriety, speak of a pulmonic and systemic heart. You see, in my hands, these two hearts completely separated, for each is complete in itself; this one is the feebler pulmonic heart, this the stronger systemic heart. Nevertheless, the circulation of the blood itself is not *two-fold*, or *double*, but *single* and *individual*, and when perfect I believe that there is a *certain degree* of pressure made by the blood in every part of its course, not *equal*, however, in every part, but yet so proportionate and so dependant that if that pressure fail in *any* it must fail in *all*; and that if the course of the blood be unduly augmented, or impeded, in *any* part of its course by the operation of a general cause, it is so in *all*. Thus, if the general flow of the blood be augmented by exercise, or impeded by certain diseases of the heart, or if there be loss of blood, *every* part of the circulation, whether it be designated pulmonic or systemic, suffers. We may, in fact, view the blood as being compressed in all its course by an elastic force, against which it reacts in its turn. If this force be augmented, or the quantity of the blood itself diminished in any part of that course, it is obvious that the *whole* of the circulation must experience the change, and that *any* individual organ predisposed to disease may be *morbidly* affected.

In order that the circulation may be *equable* in all its course, it is especially essential that the two hearts act in perfect concert, and each proportionably to its share in the general, and as it really is, the simple and individual circulation. In health too—in the healthy rhythm—the two hearts, that is the auricle of each heart and the ventricle of each heart, contract simultaneously, the stimulus of the purple blood returned from the system upon the highly irritable pulmonic heart, being equal to the stimulus of the vermilion or aerated blood, returned from the lungs, upon the less irritable systemic heart. When these proportions are, from any cause, subverted, the rhythm of the action of the heart is morbidly and variously modified.

You will readily trace the *one* circulation, pulmonic and systemic, and you will readily perceive how an affection of *one part* must be immediately felt in *every other*. You will perceive, too, that the point upon which I am insisting is one of importance, and that it enables us to explain the pathological influence of one part of the circulation upon the others in a clear and forcible manner.

It is important for you, further, to remember, that each of the two hearts leads to *arteries*, that these issue in vessels termed capillaries, and that these in their turn terminate in the veins, which eventually issue in the other heart. From this second heart the blood pursues a *similar* course through arteries, capillaries, and veins, until, by returning to the first heart, the circulation is complete.

In *any* part of this double course the blood may be impeded, or totally arrested, and in this case we observe the effects of congestion, or of the impeded flow of blood, as we see in cases of diseases of the heart, inflammation, obliteration of the veins, &c. For further details on this point I may refer you to my observations in a previous part of this course of lectures.

In treating of the diseases of the circulating system, I must begin with those of the heart itself and the large arteries, as the most important. I will then consider those of the other parts of this system.

In treating of the diagnosis of the diseases of the heart and large arteries, it will be my object, as usual, to select all the really important and practical distinctions, whilst I avoid the useless minutiæ with which this subject has been encumbered.

The most frequent diseases of the heart are *dilatation* and *hypertrophy* of the *ventricles*, single, or variously combined.

The diseases of the heart next in frequency, are *ossification*, or excrescences, of the *valves of the aorta*, or of the *mitral valve*; these generally induce, eventually, hypertrophy or dilatation of the ventricles.

Next follows *hypertrophy* or *dilatation of the auricles*, of still more rare occurrence, and usually consecutive to disease of the valves or ventricles.

This abstract will enable the young student to form distinct ideas of the diseases of the heart of most usual occurrence: *pericarditis* and *hydropericarditis*, and *aneurysm of the aorta* and *large arteries*, must be added, and the list of diseases of the heart and large vessels is nearly complete.

One of the most important applications of the stethoscope is to ascertain the condition of the heart and large vessels. The beat of the heart must be examined in regard—1, to its *diffusion* over the thorax; 2, to its *impulse*; 3, to its *sounds*; and 4, to its *rhythm*.

In the healthy state, the sound of the heart is more or less confined to the space between the cartilages of the fourth and fifth ribs of the left side, and at the bottom of the sternum, in which points the left and right sides of the heart are heard respectively. In thin persons and children it is heard under the clavicles.

When the extent of the beats of the heart is augmented, they are heard in the following spaces:—1, along the left side of the chest from the axilla downwards; 2, along the right side; 3, along the back of the left side; 4, along the back of the right side.

The degree of diffusion of the beat of the heart is proportionate to the thinness of its parietes, the feebleness of its contractions, and to the size of the organ.

The impulse of the heart is inversely as the diffusion of its beat, and directly as the thickness of the organ. Augmented impulse is therefore the sign of hypertrophy; diffusion of the sound, with the absence of impulse, the sign of dilatation.

The sound of the heart is double, consisting of a first, dull and prolonged, coinciding with the contraction of the ventricles, and a second, short and distinct, coinciding with their dilatation.

The degree of sound is inversely as the impulse, and directly as the diffusion, of the beats of the heart; it is, consequently, dull in hypertrophy, loud in dilatation.

Of all the theories of the sounds of the heart, that of M. Rouanet appears to me the most probable. According to this author

The first sound of the heart is owing to the sudden closure of the auriculo-ventricular valves on the contraction of the ventricles;

The second to the sudden closure of the sigmoid valves of the aorta and pulmonary artery.

With this view pathology strictly accords; whilst the valves are free from disease, the two sounds are distinct and clear; but as these become diseased, the sounds are obscured and replaced by others, as the bellows, the saw, the rasp-sound, &c.

The following is the healthy rhythm of the heart:—the first sound is synchronous with the impulse and the beat of the pulse; the second speedily succeeds; and, after a rather longer interval, the first is repeated.

In hypertrophy the first sound is still more obscured and prolonged; in dilatation the first sound is louder, more like the second.

The next subject to be noticed is that of unnatural sounds of the heart. These are two; the *bellows' sound* and the *cat's purr*.

These sounds vary exceedingly, as do also the morbid conditions in which they exist. These are, contraction of the valves; hysteric and nervous affections; the state of inaction from loss of blood; &c.

These diseases may be thus presented in a tabular form:—

I. Disease of the Heart in General.

II. Hypertrophy.
  1. *Of the Left Ventricle.*
  2. *Of the Right Ventricle.*

III. Dilatation.
  1. *Of the Left Ventricle.*
  2. *Of the Right Ventricle.*

IV. Hypertrophy with Dilatation.
  1. *Of the Ventricles.*

2. *Hypertrophy of One Ventricle and Dilatation of the Other.*
3. *Of the Auricles.*

V. Carditis; Pericarditis; Endocarditis.

VI. Disease of the Valves.
1. *Of the Aortic Valves.*
2. *Of the Mitral Valve.*

VII. Aneurysm of the Aorta.

VIII.—The Symptomatic Affections.
1. *Deficient Action of the Heart.*
2. *Palpitation. Bruit de Soufflet.*
3. *Angina Pectoris.*
4. *Pulsation in the Epigastrium.*

I.—DISEASE OF THE HEART IN GENERAL.

I. *The History.*—The most frequent cause of disease of the heart is some antecedent disease, attended by dyspnœa, and consequently most frequently of the lungs. The principal of these are—

1. *Dry Bronchitis.*
2. *Emphysema.*
3. *Phthisis.*
4. *Chronic Pneumonia.*
5. *Empyema.*

To these causes are to be added muscular efforts, mental emotions, and nervous diseases. And to these, it is said, the congenital disproportion between the size of the heart and the calibre of the aorta, and the congenital unusual thickness or thinness of the ventricles.

There is still another addition to be made to the list of causes of disease of the heart, of an important kind: it is that of

The Metastasis of Rheumatism.

II. *The Symptom* of disease of the heart in its early stage, is dyspnœa, uniformly induced, or aggravated, by muscular effort or exertion; in its later stages, various effects of derangement of the capillary circulation are superadded.

1. Disease of the heart, even in its early stages, is highly characterised by the invariable aggravation of the dyspnœa, on making the patient walk quickly, or run up stairs; the beat of the heart becomes violent or tumultuous, and there is a sense of great oppression, or of suffocation. The sleep is disturbed by frightful dreams.

In the later stages, and more aggravated forms of disease of the heart, the dyspnœa and oppression are permanent, perhaps extreme: not only muscular effort, but the horizontal posture, becomes insupportable.

The countenance, at first of a dingy pallor, becomes tumid and livid, or of a purple hue, especially the lips; the posture is raised by successive additions of pillows, until it becomes perfectly upright, and eventually the patient may require to have the feet placed low, whilst his head and shoulders are raised, and the shoulders or elbows are supported. The dyspnœa and oppression augment; the various complications to be immediately enumerated, with their appropriate symptoms, are gradually superadded.

The symptoms and signs of each particular disease of the heart will be detailed under their respective heads.

III. *The Complications* of disease of the heart form, with that disease, and its most frequent causes, a series or chain of organic lesions of the most interesting character. The causes have been already enumerated. The effects are the following:—

1. Cerebral Apoplexy.
2. Bronchial, and
3. Pulmonary Hæmorrhage.
4. Congestion of the Liver; &c.
5. Congestion of the Membrane lining the Ventricles and the Aorta.
6. Congestion of the
   a. Sub-serous,
   b. Sub-mucous, and
   c. Sub-cutaneous Tissues.
7. Effusion into the
   a. Ventricles,
   b. Pleura,
   c. Pericardium,
   d. Peritoneum,
   e. Cellular Membrane:
1. Of the Lungs; Œdema,
2. Of the Intestines,
3. Of the Integuments; Anasarca.

IV. *The Effects of Remedies.*—There is a great degree of relief from bloodletting, and from digitalis, not observed in nervous affections of the heart.

V. *The Treatment* consists in subduing the action of the heart by small bloodlettings, by digitalis, by extreme quiet of mind and body, by the most rigid abstinence. These remedies carefully, judiciously, and perseveringly administered, have seemed sometimes to subdue the symptoms, even of organic disease of the heart, for a time.

II.—HYPERTROPHY.

1. *Hypertrophy of the Left Ventricle.*

I. *The Symptoms of Hypertrophy* of the left ventricle of the heart, in addition to the symptoms of disease of the heart in general, are a florid complexion, forcible pulsation of the heart, a strong, and generally a regular pulse; there are frequent palpitations.

II. But it is to the *Signs* afforded by the stethoscope and percussion, that we must have recourse for the diagnosis of the individual diseases of the heart. The contraction of the ventricle is accompanied by a strong impulse and a feeble sound; it is prolonged in proportion to the hypertrophy, and is felt and heard over a small space, and principally *between the cartilages of the fifth and sixth ribs*, on the left side of the chest. The second is brief and low.

III. *The Complications.*—It is in this form of disease of the heart that apoplexy most frequently occurs as a complication.

IV. *The Morbid Anatomy* consists in augmented thickness and firmness of the parietes of the ventricle.

2. *Hypertrophy of the Right Ventricle.*

I. *The Symptoms.*—There is, in this case, greater dyspnœa; and there is frequently an obvious pulsation of the jugular veins.

II. *The Signs.*—The beat of the heart is attended with great impulse; there is rather less dulness of sound than in hypertrophy of the left ventricle; these signs are perceived under the sternum.

III.—DILATATION.

1. *Dilatation of the Left Ventricle.*

I. *The History.*—This form of disease of the heart occurs most frequently in women, who have naturally a heart of thinner parietes than men. Its causes are ossification of the valves, congenital tightness of the aorta, diseases of the lungs, laborious occupations, &c.

II. *The Signs.*—The only true sign of dilatation of the left ventricle is a clear and loud sound, heard under the ear or stethoscope, chiefly between the cartilages of the fifth and sixth ribs. The extent to which this sound is diffused is the measure of the degree of dilatation.

2. *Dilatation of the Right Ventricle.*

I. *The Symptoms.*—According to Laennec habitual swelling, without perceptible pulsation, of the jugular veins, is the most constant, yet still an equivocal, symptom of dilatation of the right ventricle.

II. The only pathognomonic sign is the loud sound of the heart under the lower part of the sternum.

IV.—HYPERTROPHY WITH DILATATION.

I. *The Symptoms.*—This disease is attended by violent palpitations: the head, the limbs, are moved at each contraction; the pulsation of the carotids is visible, and the pulse is full, strong, and vibrating.

II. *The Signs* afforded by the stethoscope, or the application of the ear, are those of hypertrophy and of dilatation, combined: the contraction of the ventricles is attended by great impulse and a notable sound; the second sound is loud; the ventricular contraction is heard and felt over a great extent. The situation in which the contractions of the ventricles are perceived, determines whether the left or the right ventricle alone, or both, be affected.

III. It is in dilatation with hypertrophy that the heart acquires the greatest volume, and in which, consequently, the sound, on percussion of the region of the heart, is most obscure.

Sometimes there is dilatation of one ventricle and hypertrophy of the other: there is then the corresponding augmented impulse, or sound, between the cartilages of the fifth and sixth ribs of the left side, or at the lower part of the sternum, respectively.

Dilatation and hypertrophy of the left auricle, usually the effect of disease of the mitral valve; or of the right auricle, the effect of hypertrophy of the right ventricle; are not to be distinguished from those original diseases: and if they could, the distinction would be more curious than useful.

IV. *The Morbid Anatomy.*—The parietes of the ventricles are greatly thickened and their cavities enlarged; the heart, in consequence, occasionally attains an enormous size.

V.—CARDITIS.

I. *The Causes* of carditis are, exposure to atmospheric inclemencies, to cold and damp, &c. Carditis is frequently a complication of rheumatism.

II. Carditis is always complicated with pericarditis, endocarditis, or both.

III. *The Morbid Anatomy* consists in—

1. Softening; diffused Suppuration; Abscess.
2. Ulceration; an Aneurysmal Sac; Perforation.
3. Induration.

PERICARDITIS.

I. *The History.*—The causes of pericarditis are—rheumatism; exposure to cold or damp; and it is said, a blow, violent exertion, or mental affection. Men are more subject to this disease than females.

II. *The Symptoms* or *Signs* of pericarditis are sudden pain or anxiety in the region of the heart, palpitation, dyspnœa, irregularity of the pulse, the absence of respiratory murmur under the ear, and of sound on percussion, and external tumour; the contractions of the ventricles frequently become stronger and irregular, and, when the surface of the part is covered with a false membrane, they are attended with the creaking,—to and fro, sound of new leather.

III. *The Morbid Anatomy* consists of

1. The effusion of Serum, with or without Lymph, Pus, or Blood.
2. The Formation of a False Membrane over the Surface of the Heart or Pericardium, as represented in the subjoined wood-cut.
3. Adhesions; sometimes Ossifications.

ENDOCARDITIS.

I. *The Causes* of endocarditis, as of pericarditis, are rheumatism, exposure to atmospheric inclemencies, cold or damp, &c.

II. *The Signs and Symptoms* are, with those of pericarditis, with which endocarditis is frequently combined, the "bruit de soufflet"—the bellows' sound, and those of disease of the heart and of its valves in general.

III. *The Morbid Anatomy* consists in—

1. Effusion of Lymph, Pus, &c.
2. Ulceration.
3. Induration; Ossification; Growths, &c.
4. Contraction, &c., of the Valvular Orifices.

IV. *The Treatment* of carditis, in all its forms, consists in the application of all our antiphlogistic remedies in the most energetic yet cautious manner; but *bloodletting*, general and local, *mercury* to speedy, complete, and continued salivation, are our principal means of cure.

VI.—DISEASE OF THE VALVES.

I. *The Signs* of disease or contraction of the valves consist in the "bruit de rape," and the "frémissement cataire." The former resembles the sound of a rasp acting upon wood; the latter the purring of the cat felt under the finger. The pulse is irregular. There are many of the general symptoms of disease of the heart.

II. *The Morbid Anatomy.*—The mitral valve and the sigmoid valves of the aorta become ossified, or assume a cartilaginous hardness, as is beautifully pourtrayed in these sketches from Meckel:—

they are then thickened and altered in form, and frequently partially closed, so that the course of the blood is impeded. Such disease occurs rarely on the right side of the heart.

VII.—ANEURYSM OF THE AORTA.

I. *The History.*—No disease is more insidious than aneurysm of the aorta. It sometimes exists, and even proves suddenly fatal, unsuspected, in persons apparently the most healthy; and, until it induce some symptom of the compression of adjacent parts, it may be indetectible.

In other cases morbid growths take place from the surface or borders of the valves.

II. *The Symptoms.*—Aneurysm of the aorta consists in simple, forcible pulsations, perceptible over a circumscribed spot of the anterior parietes of the thorax, or along the spine, under the ear and finger. These pulsations are more forcible than those of the left ventricle. It is frequently extremely difficult to distinguish such aneurysmal pulsations from those of a tumour situated over or upon the artery. In both cases the sound emitted by percussion is obscure.

III. *The further symptoms* of aortic aneurysm are, in fact, those of its effects upon contiguous parts, or organs, which may be arranged in the following manner:—

1. Compression of the Trachea, or Bronchia.
2. Compression of the Œsophagus.
3. Compression of One of the Subclavian Arteries.
4. Protrusion and Wearing of the Ribs or Sternum.
5. The Wearing of some Part of the Vertebral Column.

1. Compression of the trachea or bronchia induces symptoms similar to those of chronic tracheitis, or bronchitis. The stethoscope should, therefore, be carefully applied in every case of these latter diseases.

2. Compression of the œsophagus leads to dysphagia. The case of aneurysm must be distinguished from that of other tumours compressing this organ, or of stricture.

3. When aneurysm compresses one of the subclavian arteries, it leads to dissimilarity in the pulse of the two radial arteries.

4. Protrusion and wearing of the ribs or sternum will be attended by the simple pul-

sation of the aneurysm. The case must be distinguished from that of a tumour moved by the subjacent artery.

5. Wearing of the vertebral column is attended by pains described as resembling those of rheumatism, or as being of a gnawing, tearing, or lacerating nature. The stethoscope must be called in aid of the diagnosis.

These various *effects* may be readily understood on an inspection of these sketches :—

The symptoms will depend entirely upon the direction taken by the aneurysmal tumour, and the part or parts compressed by it. I need scarcely advert to the well-known fact of perforation, or rupture, of the aneurysmal sac ; but it may be important to observe that sudden death occurs both with and without this event.

It ought to be repeated that a tumour, as encephalosis, may occasion precisely similar effects.

As subjects of anatomical interest, I may present my reader with the subjoined sketches of ruptured aortic valves, ossification of the artery, and of *phlebolithes*.

Before I leave this subject, I must state that when the circulation is interrupted by disease—inflammation, ossification, &c.—of the *arteries* of a limb, especially of the lower

extremity, gangrene is apt to supervene; this constitutes, in aged persons, the disease termed *gangræna senilis;* when, on the contrary, the circulation through a principal vein is interrupted, œdema, anasarca, or a dense white tumefaction, is the consequence, as in *phlegmasia dolens*, a similar disease unconnected with the puerperal state, &c.

VIII.—THE SYMPTOMATIC AFFECTIONS.

The first of the symptomatic affections of the heart are those in which the action of this organ is too feeble; these are—

1. *The Erethismus Mercurialis.*
2. *The Effects of the Digitalis.*

The Symptoms in the former case have been already detailed.

The Symptoms resulting from the digitalis are nausea and vomiting, debility, faintness, and cold perspirations; the action of the heart and the pulse are feeble and intermitting.

The second symptomatic affection is the

Angina Pectoris.

I. *The History.*—This affection consists in attacks which recur at various intervals, generally from the influence of muscular effort or exertion, as in walking quick, up an ascent, or meeting the wind; or from mental emotions, especially anger. This affection occurs principally in men past fifty.

II. *The Symptoms* are a sense of pain, pressure, or constriction in the region of the heart, across the breast, especially on the left side, and of pains or numbness down the arms, especially the left. In females the mamma is sometimes extremely sensitive to the touch. In extreme cases there are palpitation, or syncope, and suffocating dyspnœa, and the apparent danger of dissolution. It is sometimes suddenly fatal.

At first the intervals are long and free from indisposition; afterwards they become shorter, and the angina is far more readily excited, if not in some degree constantly present.

III. *The Morbid Anatomy.*—Heberden observes,—"Inciso cadavere hominis, qui hoc morbo subito perierat, expertissimus anatomicus nullum vitium deprehendere potuit in corde, aut valvulis, aut in arteriis, venisve vicinis, præter exigua rudimenta ossea in aorta." Laennec is of opinion that the angina pectoris, although it may be accidentally associated with diseases of the heart, does not, as Parry supposed, necessarily depend upon it.

IV. *The Treatment* is that for disease of the heart in general, and that for dyspnœa, or other primary morbid affection.

The third class of symptomatic affections of the heart consists of—

1. *Palpitation, and the*
2. *Bruit de Scie.*
3. *Frémissement cataire.*

These symptoms are apt to occur in—

1. *Intestinal Irritation.*
2. *Reaction from Loss of Blood.*
3. *Hysteria.*
4. *Chlorosis.*
5. *Dyspepsia.*

It is only necessary for me to refer to the descriptions of these affections, the diagnosis flowing from the general symptoms.

Palpitation is more felt by the patient than the beating of the heart in hypertrophy; and it is, in fact, attended by little real impulse, scarcely raising the ear or the stethoscope.

The "bruit de scie" is, like palpitation, a frequent symptom in some nervous affections. It attends the reaction from loss of blood, and may be produced in a dog very readily, as I have shown in a recent essay. I have also observed it most distinctly in chlorosis. It has been more recently particularly noticed by M. Bouillaud, who has compared it to the noise made by a toy, and has denominated it "*bruit de diable.*"

The last symptomatic affection which I shall notice in this place is

Pulsation in the Epigastrium, &c.

This affection seems, like palpitation, to be dependent on nervous causes, and is distinguished, like that symptom, by occurring in paroxysms, in dyspeptic persons, from mental emotion, &c. Sometimes aneurysm is imitated still more accurately by the pulsation being communicated to an apparent tumour, formed by gas pent up, or feculent matter detained in folds of the colon.

Dr. Baillie, who has given an interesting account of this malady in the "Trans. of the Col. of Physicians," vol. iv., p. 271, observes, "It has frequently occurred to me to have been consulted, within the last fifteen years, respecting a pulsation which is distinctly to be felt in the epigastric region. When the patient first discovers this pulsation he is generally greatly alarmed at it, and has seldom found much comfort from the opinion which has been given him by his medical attendant concerning its nature. From a good deal of experience upon this subject I am enabled to say, that the increased pulsation of the aorta in the epigastric region very rarely depends upon any disease of the aorta itself, or of its large branches in that place, and that this occurrence is almost constantly of very little importance. In the whole course of my medical experience I recollect but one instance in which this pulsation depended upon an aneurysmal swelling of the artery."

Dr. Baillie adds, "Some years ago I was consulted by an old man concerning a slight paralytic affection, and when the conversation respecting that part of his complaints was finished, he spoke to me about a pulsation in the epigastric region; it was most distinctly to be felt, and he told me that on account of this pulsation he had consulted

Sir Cæsar Hawkins, Mr. Bromfield, and Dr. Hunter, about twenty-five years before the time of his consulting me. Sir Cæsar Hawkins and Mr. Bromfield, he said, told him that it was an aneurysm of the aorta, and Dr. Hunter told him, that he did not know what it was. Dr. Hunter saw enough of peculiarity in this case to make him doubt, but not enough to enable him to decide, that there was no disease in the aorta."

I extract the following instructive case from the admirable work of Laennec (ed. 2, t. ii., p. 759):—

"About eighteen years ago I saw, in consultation with Bayle, a young person attacked with a double tertian fever. In passing my hand over the abdomen to ascertain whether the epigastrium was tender, I found in the lower part of this region a tumour as large as the fist, elastic, giving strong pulsations, isochronous to those of the pulse, and accompanied by a very distinct movement of general dilatation. Bayle repeated the observation, and neither of us doubted that the patient was attacked with aneurysm of the aorta towards the top of the cœliac artery. We, however, gave cinchona to subdue the febrile symptoms, which was very easily accomplished. For more than a month the tumour presented similar pulsations. The patient, although free from fever, still remained weak, and experienced much nervous agitation. It was not till about six weeks after the cessation of the fever that she began to resume her strength and to feel perfectly convalescent. About this time I again examined the abdomen, and was surprised to find neither the tumour nor the pulsations which existed only a few days before. I communicated this singular observation to Bayle, who could not, any more than myself, find any vestige of the aneurysm, which we thought we had detected. I have had frequent opportunities of again seeing and examining the subject of this observation, who has never presented anything analogous. I have since met with several cases quite similar, and can now easily distinguish them from real aneurysm of the abdominal aorta, inasmuch as in the latter you do not feel the calibre of the artery, while in the former you feel perfectly that it preserves throughout its natural diameter."

Pulsation, the sense of purring, the "bruit de soufflet," the "bruit de scie," occur along the abdominal aorta, in the carotid, and even in the radial artery, from similar nervous causes.

There is a subject to which I must advert in closing this lecture. In cases of the *effects of loss of blood* with *reaction*, in *chlorosis*, &c., there is a peculiar sound heard over the heart and arteries. I think, but I am not sure, that I was the first to detect this phenomenon during a considerable series of experiments on the effects of loss of blood, performed in 1831, and published in the "Transactions of the Medico-Chirurgical Society," in 1832, vol. xvii. It has since been much noticed by M. Bouillaud, M. Andral, &c. It is principally important, in a practical point of view, from the necessity implied of distinguishing it from the "bruit de scie," &c., induced by disease of the heart.

In dogs this phenomenon exists whenever *reaction* is produced by the repeated detraction of blood; it ceases when syncope, or sinking, is superinduced. It exists in the human subject in similar circumstances.

A DISCOURSE ON DIAGNOSIS;

SHOWING THE NATURE OF THE VARIOUS EXPRESSIONS OF THE HUMAN EYE, IN SOME DISEASES.

By WM. MACDONALD, *M.D., Greenock, Vice-Pres. of the Greenock Med. and Chirurg. Association.*

(Read before the Association, Oct. 1837.)

I HAVE formerly, and I flatter myself with success, attempted to show that the human tongue presents diagnostic appearances in disease.* It would seem probable that the same remark is applicable to the human eye; indeed, in every case of investigation, whether of a physical or moral nature, and in which certainty is unattainable, no rule exists for our direction but the commanding probability. On this occasion, I apprehend, that the commanding probability will be found in favour of my position, with regard to the organ of vision. The student of medicine is often embarrassed with difficulties in his investigations. The principal perplexity which is applicable to this subject, and which in my own researches has appeared to attend the many writings concerning the eye, is this,—it has been connected with various other things, which although contributing to the writer's particular purpose, has yet distracted my attention, and prevented me from obtaining that clear and distinct view of the object which I desired, therefore I wished to see it and survey it alone. Besides, I was convinced that no author had very particularly touched upon the nature of the various expressions of the human eye in disease; I have, therefore, resolved, for my own instruction, to add what they have omitted, and to place in one view an abridgment of the subject under consideration, that will be the more interesting in proportion as it is found to be true by fact and experience.

In symptomatic fevers, and in acute diseases, during the progress of reaction, we observe the eye assuming a variety of

* See LANCET, vol. ii., 1835-6, p. 363.

aspects, as an enlarged, full, prominent, heavy, or watery state At one time the iris presents a fainter shade of the natural colour than it exhibits in health; at another time the eye becomes clear, bright, glassy, fierce, wild, and injected. Sometimes we observe the eye irritable, fixed, and distorted, and the pupils are occasionally contracted and dilated. The augmented state of the organ of vision, together with the watery condition of the eye, lead us to suspect that there is increased action in the circulation, with determination of blood to the head, as the pulse is full, frequent, strong, and hard. The iris presenting a fainter shade of the natural colour than it exhibits in health, indicates established congestion in the head, with a disposition to hydrocephalus. But what is the cause of the natural colour of the iris? and what is the cause of the change which takes place in the colour of that membrane during the progress of disease? These questions are asked with unexceptionable propriety, and certainly demand candid and satisfactory answers; such answers as are consistent I will endeavour to give. In truth, colour, whether it be in the animal or vegetable world, seems to be a secret of nature; in every subject, whether natural, moral, or philosophical, we meet with secrets and mysteries, which seem to be far above the power of reason to comprehend. Nevertheless, we are not on this account to reject every branch of science, but rather let us keep the subject in which we are engaged constantly before the mind, and wait on until the first dawning opens gradually to a clear and full light.

With regard to the first question we reply, that the colour of the iris arises from a disposition given to the surface of that membrane, to repel some of the rays of light more than the other rays. Hence the natural colour of the human eye will be according to the ray or combination of rays which are thus reflected. This disposition of the iris, either to reflect or to absorb the coloured rays, is modified by the density and quantity of the aqueous humour, and of the dark pigment, similar to that of the choroid, which lines the posterior surface of the iris; by changes which take place in the transparency of the pores of the iris generally, as well as by differences in the diameters and arrangement of the fibres of the iris, which are seen by the assistance of a magnifying power, and which pass from the great circumference of that membrane to the pupil. We now perceive the reason of the colour reflected by the iris, whose anterior surface, from the poverty of our language, is said to be differently coloured in different individuals. It will be seen at a glance that this view of the subject is not very tenable; indeed, our senses teach us that the transparency of bodies influence their powers of reflecting the coloured rays, whereas opacity produces the contrary effect. We are also assured by the same agents, that the human eye presents different colours, and combination of colours, in different persons, depending on increased reflection, together with diminished absorption of the rays, and *vice versa;* that the mixture of different rays, and in different proportions, forms other hues; that the absence or absorption of all rays constitutes blackness, and that the combination of certain rays, and in certain proportions, constitutes whiteness. Now, when the coloured rays of light strike the anterior surface of the iris, a combination of these rays is in part repelled, that is, struck off, bent back, or reflected; and this combination of the coloured rays enters the eye of the spectator, and conveys to his mind, by the aid of perception, or internal sensation, a clear idea or impression of the natural colour of the human eye, whether it be blue, gray, or hazel.

It is obvious that the particles which compose the white light vary in magnitude. The particles which compose the red rays are greatest, whereas those which compose the violet are the smallest of all; the particles of the red rays being to those of the violet in the proportion of 1275 to 1253. This view of the subject is applicable to the question under discussion, whether we believe in the existence of the seven coloured rays, or embrace the views of some modern philosophers, who have reduced the seven prismatic colours to three primary ones, or follow some who have held that there is not any definite number of colours, but rather a gradation of tints, from the extreme red to the extreme violet.

To the second question we reply, that the reason why the iris presents in disease a fainter hue of the natural colour than is exhibited by that membrane in health, arises also in consequence of a disposition given to that portion of the eye to repel a combination of rays, which, during the presence of health, was either absorbed or otherwise lost. Again, this combination of rays which are repelled by the iris in disease, constitutes whiteness, and it is obvious, when whiteness is superadded to the natural hue presented by the iris, that the result will be a fainter hue of the natural colour of the eye.

Let us illustrate these facts by a few examples. We now apprehend the cause why one colour only is reflected by the iris in health, and let us suppose the colour under consideration to be blue. In disease, however, depending on congestion of the head, the blue part of the rays, which is presented by the iris, becomes fainter in its hue, in consequence of the congested state of its striated lines and fibres, which become irregularly larger in diameter, and thus reflect

a combination of rays, which in health was not repelled; this combination of all the coloured rays being nearly in the proportion in which they exist in the solar beam, constitutes a white tint, which being added to the natural colour, blue, makes the blue of a lighter hue. The same remarks may be applied to some of the changes which obtain in gray and hazel eyes, during the assaults of disease; indeed, increased or diminished reflection of the seven prismatic colours by the iris, seems to be the only satisfactory way of accounting for several appearances of the eye under consideration.

When the organ of vision, of whatever colour, is examined in a dark place, by the aid of very little solar light, it appears red; the reason of this phenomenon is obvious, and arises from the presence of a great quantity of vapour, which, being between the spectator and the object, presents an obstruction to the easy passage of the reflected rays of light, so that the more dense rays only reach the eye of the beholder; the dense rays, being the red ones, which, in this case, enter the eye of the spectator, and thus convey to his mind an idea of the red part of the rays alone; the remaining rays of light being weaker, and having smaller particles than the red ones, seem to be retarded by the presence of vapour, and, consequently, are not to be seen. We may now perceive the cause why, in such circumstances, the red part of the rays alone are presented by the iris; upon the same principle we may account for the fact which is invariably observed by divers, "*that every object under water assumes a red appearance.*"

The colours which are presented by the human eye pass into each other by degrees, and there are great diversities of shades, even in the space usually allotted to one colour. Much practice is necessary to enable us to distinguish slight differences in the shades and tints of colours of the organ of sight; some eyes are incapable of accomplishing this act, especially when particular colours are concerned; it is well known that many persons cannot distinguish certain colours from other colours in nature, and it is also well known that the eyes of such individuals are insensible to the red part of the rays as well as to all the compound colours into which the red rays enter; the cause of this must arise either out of a defect in the retina and optic nerve, or from a paralysis of the portions of these nervous tissues which usually convey the impression of the red rays by perception to the mind.

The eye presenting a clear, bright, and glassy aspect indicates that the vascular congestion which may have existed in the brain and its membranes, in the chest, and in the cavity of the abdomen, has now assumed the inflammatory type; it is now generally allowed, that during the ravages of inflammation the natural heat of the system is almost always augmented, and especially when inflammation is seated near the surface of the body an alteration of several degrees takes place; this arises from a disposition given to the human system in such diseases to increase the direct absorption of light, which is converted into heat by the calorific rays by which it is accompanied, and at the same time to augment caloric in the system, and diminish its radiation; these facts are manifest, and cause the eye to appear phosphorescent, luminous, shining, or clear, bright and glassy. It is obvious that in addition to the slow radiation of caloric which obtains in such cases there must exist a slow emission of light too, the more especially if the phosphorescence appears to be very manifest by the eye; when the organ of vision appears fierce and wild these signs indicate organic disease of some one of the three great cavities which occur in constitutional disturbance. It is now generally believed that we observe mania when the brain and its membranes are the seats of change of structure; the mere apparent absence of organic lesion in this disease does not assure us that no morbid change has taken place in the brain, as it is at least probable that changes in the intimate structure of the capillary vessels of parts so delicate as those contained within the head may exist and prove the cause of insanity, and yet be so minute as to elude, on dissection, the observation of our senses; indeed, the frequent occurrence of apoplexy, palsy, and epilepsy, in the course of mental diseases, points out a strong connection between insanity and the organic alterations of structure within the head. It is to be remembered that the fierce and wild aspects of the eye pass into each other by insensible gradations,—that it is often impossible to characterise them with precision, yet it is manifest that the irritations which obtain in the brains of maniacs produce a peculiar muscular action, constituting a wandering motion of the organ of sight in every possible direction, and that, too, in a manner peculiarly tiresome to the beholder, for during a paroxysm of such a disorder the eyes appear as if stiffly and firmly pushed forward, and they seem to the sufferer himself to flash fire. All these characteristic symptoms of mania are striking, and seem, from the subtle nature of the disease itself, to justify the remark, that the eyes of every fierce maniac are truly wild.

When the pupils appear contracted and irritable, we are enabled to determine the presence of excitement, commotion, or concussion of the brain; and the danger, in such cases, I have been always enabled to estimate by the appearance of the pupils, for if contractile power remain in the iris

the patient will in general recover. But dilatation or immobility of the pupils indicate apoplexy. That the contrary opinion has been adopted by some practitioners, is well known, but the reasons alleged by them for their respective doctrines have, as far as they have fallen under my observation, been less satisfactory than I wished. Indeed, it appears to me evident that the distinction between contraction and dilatation of the pupils has been less clearly made by medical authors, than most other distinctions. It will be impossible for any man clearly to see and to limit exactly what they intend when they use the same terms for opposite conditions of the organ of vision. To remove this difficulty, and to enable you to know what I design while I am using these words, I will attempt to define them with some particularity. Dilatation of the pupils may be defined an involuntary contraction of the almost invisible muscular fibres of the iris, or that state of contraction of the said fibres which is not spontaneously disposed to alternate with relaxation. Again, contraction of the pupils may be defined, a voluntary dilatation of the iris, with a view, as it would seem, to preclude the ingress of any stimulus to the brain, which must invariably be in an irritable condition under such circumstances. As far as my experience goes, we have always dilatation of the pupils in cases of apoplexy; yet, it is believed by others, that in some severe cases of effusion on the brain, contraction of the pupils takes place. Now, as this statement, in my view, is the most plausible argument against the doctrine, and that which has had more weight in my own mind than any other, though I believe less relied on, and less insisted on by some practitioners than others, I will consider this difference of opinion with some attention. It will be observed, that I have taken it for granted, that the pupils are always dilated in cases of effusion in the brain, or over its membranes, reserving the proof of this doctrine to a future occasion, when I shall come to the discussion of pathological facts. Indeed, in discoursing on the collateral branches of physiology, or of any other science, it is not unfrequently necessary to suppose one or more of them for the time allowed, to preclude useless embarrassment in the discussion of the others. This, however, is only to be done for the time, and only for the purpose which has been specified. In medicine we should not finally take anything for granted, nor expect the belief of any doctrine in that science, unless the arguments, adduced to support it, be found solid and convincing. At present, I shall merely add, that my position with regard to the condition of the iris in apoplexy, will be proved by experiment, observation and experience; besides reason will concur in showing the fallacy of the opposite opinion. Indeed, I may argue the doctrine by analogy, that effused blood on the brain causes dilatation of the pupils; and, by parity of reasoning, consider myself justified in concluding that similar causes will produce similar effects, all things being equal.

It now seems to me, that the difference of opinion, which exists on this subject, may be settled by a simple process of reasoning. It is manifest that the pupils contract at the onset of apoplexy, in consequence of the commotion established in the brain before effusion takes place. This contractile power of the pupils is exercised with a view of preventing the ingress of the rays of light and heat to the brain, which must be much excited prior to the actual presence of apoplexy. Again, contraction of the pupils indicates the exercise of sensation and motion in the sensory, prior to the absolute attack of apoplexy; but when that dreadful and dangerous disorder is established in the system, and when, in consequence, sensation and motion seem to be partially suspended or wholly lost, then, and not till then, do we perceive actual dilatation of the pupils. Now, the former condition of the eye implies the affirmative; so does the latter, according to the opinion of some theorists; but supposing the conditions to be the same, the reasoning is not conclusive, as it affirms nothing without proof. Again, the position is not tenable, that supposed equivalents in sense imply similarity of effect,—it proves too much, and, therefore, proves nothing. Hence there can be no mistake in denying our assent to what is self-contradictory, as that two and two make five, or that the existence of a past event can be recalled; because these things are impossible in their nature. Now, in so far as may be consistent with the deference due to the respectable persons who have entertained opposite opinions, we affirm, without reserve, that it is easier to believe that truth and error can interchange their natures, that a square or circle can interchange theirs, as that contraction of the pupil can be pathognomonic of *the latter* stages of apoplexy.

But the nature and agency of compression of the brain, together with discussions on the compressibility of that organ, have given rise to very extensive and unwarrantable controversies in medicine. In so far as my acquaintance with the views and reasonings of medical men on this subject extends, I entertain very faint hopes of seeing any solid good spring from too refined speculations concerning the nature of causes, and the modes of their operation. The facts that such and such causes exist, and that they operate to the production of such and such effects, we, in many instances, will understand; but the nature of the cause

itself, and the nature and manner of its efficiency, are in most instances too subtle or too entirely hidden from our view either to be perceived at all, or to be so perceived as to become the materials of real and useful knowledge. Although such authors may satisfy themselves and their immediate friends as to the apparent justice of their reasonings, still their doctrines produce no lasting effect on mankind. The ancient schoolmen have furnished in their conduct apt illustrations, in this way, of misapplying their truly splendid talents.

In some stages of idiopathic fevers, and in disorders of a cachectic type, we observe the eyes diminished in size, languid, and deeply seated in their sockets; at one time the natural colour of the iris becomes clouded, and darker in its tint than in health, the conjunctiva assumes a yellowish aspect, after having presented several varieties of white,—its natural appearance,—such as bluish-white, grayish-white, reddish-white, and brownish-white, which, in respect to the gradations, are entirely equal and alike. The diminished condition and languid state of the organ of sight, lead us to suspect diminished action of the circulation, because the pulse is weak, slow, and imperfectly developed. In old age, however, a marked diminution of the eye obtains, which may not necessarily constitute diseased action. In such cases the aqueous humour in the anterior chamber diminishes in quantity, the cornea necessarily becomes less prominent, and its curvature being thus diminished, it ceases to possess the same refractive power; besides, in old age the increased activity of the absorbent system becomes manifest in every part of the body; this circumstance, therefore, fully accounts for the general loss of the adipose substance, as well as for the diminished aspect of the eyes, and also for the manner in which they retreat into their sockets. The natural colour of the iris becoming clouded and darker in its hue than in health, arises from a disposition given to the iris to absorb more rays and repel less rays of light, in consequence of the fibres of the iris becoming smaller in diameter and differently constituted as to the arrangement of their pores, than in health. The various hues of the white and yellow which are presented by the eye in jaundice indicate the presence of bile in the circulation, after having been over secreted by the liver. It is asserted by some that in jaundice the bile is merely vicarious in its secretion, upon the analogical ground of the kidneys, whose secretions, when suppressed, seem to be effected or performed by the skin, by the serous membranes of the brain, and other tissues; but in what way soever the bile is secreted during the assaults of icterus, it is manifest that its presence in the eye, enables that organ to repel the yellow rays. Finally, the dimness which the eye presents before death arises from the suspension of the secretions from the Meibomian and lachrymal glands, together with the coagulation of the last portion of these secretions on the organ of vision, from the action of cold and the loss of vitality.

It is now obvious that the various expressions of the human eye in disease are calculated to afford diagnostic symptoms which are very important in their nature; it follows by irresistible consequence, that the subject merits some attention. The student of medicine should not forget that differences of opinion exist in relation to almost every subject of research, and that no authority for learning will furnish a sufficient security from error; all opinions, therefore, and more particularly all medical opinions, may be warrantably questioned, and none are to be received unless the arguments adduced to support them be found solid and convincing. Such are a few remarks which seemed to me to refer to the nature of the various expressions of the human eye in disease. I am far from pretending to an entire freedom from error in the various views which I have entertained on this occasion. I have, for my own instruction, sought out the right reason of the changes which general diseases produce in the expressions of the eye, in as far as my abilities would reach, and I have adopted such opinions as appeared to me to be founded on the most commanding probabilities which referred to the subject under consideration.

Greenock, April, 1838.

ON THE BEST MEANS OF APPLYING

PRESSURE TO THE UTERUS AFTER DELIVERY.

By J. L. Fenner, *Esq., M.R.C.S., &c., Pentonville.*

The important principle of making such pressure on the uterus as will ensure its contraction immediately after the birth of the child, in every case of labour, is at length so fully established as to be received throughout the profession as one of the axioms of scientific midwifery. Every practitioner carries out this principle by some one or other of various methods which suggests itself to his mind,—from the simple pinning of the long napkin, to the formidable tourniquet and rolled pillow. With the ulterior desire of eliciting further mechanical improvement, I proceed to give an explicit description of two bandages which I have long used in my practice, and some medical friends, whose judgments I highly value, have tried them with the greatest satisfaction.

In forming these bandages my first object was to make pressure on the region of the uterus by a *firm unyielding substance*; because, by this means, the contraction of that

organ was found not only to be more readily produced than by a similar degree of force applied by means of a bandage composed of linen or of any soft substance,—but, having been so produced, was more readily maintained contracted. To this principle we must refer the signal benefit derived from pressure by the firmness of the hands in cases of sluggish uterus; but hands and arms soon tire at this employment, and consequently the degree of pressure necessary to the complete contraction of this organ, instead of being steadily continued, becomes relaxed, and hæmorrhage occurs, or if it have been momentarily suspended, is renewed.

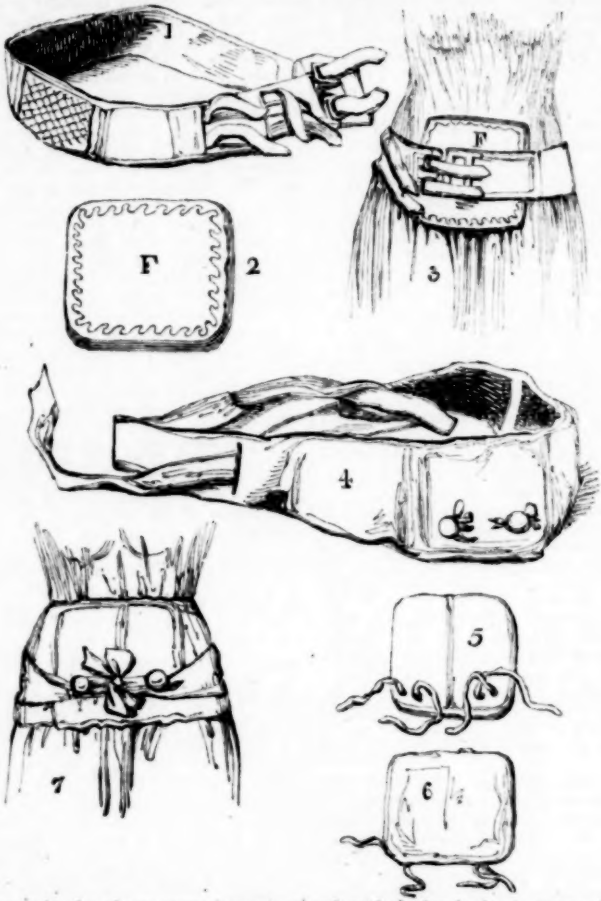

Figure 2 in the above engraving represents a piece of mill-board, obtained from the stationer, 7 inches by 8, padded on the inside with two layers of wadding, and covered with flannel or kerseymere. This plate has been previously divided down the middle, as seen in *fig.* 3, then united by pasting a strip of leather on each side so as to form a joint; thus enabling it to be folded into half its compass, like a closed book; and, with the band, *fig.* 1, wrapped round it, to be conveniently put into the pocket. The band, *fig.* 1, which is made of variable length to suit the different dimensions of different females, is composed of webbing, three inches wide, is furnished with two buckles, and three sets of straps to regulate its pressure, and has four inches of India rubber web let into it, so as to combine a degree of elasticity with the force

of its pressure. *Fig.* 3 shows the bandage duly applied; the band being under the crests of the ilia, and carried round the hollow of the back, just at the junction of the sacrum with the spinal column, by which it is prevented slipping upwards. This bandage, from its easy application, I use immediately after the birth of the child, directing the nurse, if there be hæmorrhage, to increase the pressure by buckling it tighter. This simple bandage answers well for every purpose proposed, is capable of exerting a great degree of pressure, and of thus facilitating or accelerating the complete contraction of the uterus.

When the patient is comfortably in bed, I usually apply what I call my sash bandage; were it applied previously it would probably become soiled. This is represented, *fig.* 7, applied under the crests of the ilia, and carried to the hollow of the back, just above the sacrum. *Fig.* 5 represents the exterior, and *fig.* 6 the interior of exactly the same plate, with the joint as described in *fig.* 2, but on each side, within two inches of the bottom, are two holes through which a piece of tape is seen passed from the inside to attach a pearl button on the outside of the size of half-a-crown, as seen in *fig.* 4. *Fig.* 4 shows this bandage before it is applied, folded in half; it is about 30 inches long, and is made of white jean doubled; it incloses the plate, *fig.* 2; it tapers from the width of the plate towards each end, where twelve inches of strong broad tape are attached for tying under the buttons, as seen in *fig.* 7.

The bandage is sloped downwards to fit the hollow above the sacrum, and in its posterior portion a slit is made through which its opposite end is passed. By placing the plate over the region of the uterus, carrying the two ends of the bandage to the hollow above the sacrum, and then bringing them round under the crests of the ilia, drawing them tightly over the plate, and tying the tapes in a firm manner under the buttons, a very effectual resistance is offered to the tendency which otherwise every bandage would have to slip upwards, and recede from the part which should receive pressure.

The specific advantage of the above plan, besides affording an extraordinary degree of comfort to the patient by the support it affords to the relaxed abdominal parietes, thus preserving the natural figure, is found by experience to be the PREVENTION *of uterine hæmorrhage* and its dreadful consequences; under the pressure which this bandage is capable of producing even the formation of a coagulum of any size is almost impossible, and thus the accoucheur is enabled to leave his patient in a state of perfect security, which never can be the case if the uterus, though contracted at the time, be left without the support of some such pressure, which is therefore essential in every case in a greater or less degree. The *natural expulsion of the placenta will be much accelerated* by systematic pressure. Dr. Ruysch first, and afterwards Drs. Denman and William Hunter, vainly imagined that the *musculus orbicularis Ruyschii* was self-sufficient for the expulsion of the placenta, and also for the complete contraction of the uterus; but even this muscular power is very greatly increased by the aid of pressure. I could give the detail of several cases of retention of the placenta which I have recently seen in consultation, where the uterus sympathising with the general system, after a protracted labour, was in an atonic state. In these cases, as there was no hæmorrhage, I advised the continued permanent pressure by means of my bandage. The inherent muscular power of the uterus, thus assisted, safely expelled the placenta in every one of these cases without the introduction of the hand, and without any hæmorrhage. In one or two of these cases the placenta was retained three days and nights without any untoward symptom, and then securely and satisfactorily expelled by the natural efforts. *A manifest mitigation of after-pains* is acknowledged to be produced by means of these bandages by many females who have previously borne children and have had no such assistance.

By securing the permanent contraction of the uterus *many cases of puerperal fever may be prevented*, for it may be confidently asserted that puerperal fever is frequently produced by a congested state of the uterus. Nine-tenths of the diseases of the uterus, especially the chronic and acute *engorgements*, may be traced to the condition of that organ after parturition, and may be prevented by means of a proper pressure, such as the bandage described is calculated to make.

We have much reason to wish that those who have witnessed the accurate precision with which the various diseases of the uterus are discriminated and treated at the different institutions at Paris, where I am given to understand the most rapid progress has lately been made in this department of our art, would throw some light on this obscure subject. We might then be led to abandon the absurd system of fighting with the symptoms of the diseases of the uterus, as though they were in themselves diseases, for the adoption of a rational system founded on accurate knowledge of the various alterations of structure which produce those symptoms.

THE respiration and circulation of the infant are more frequent than those of the adult, in the proportion of 3 to 2.—*P. H. G.*

INFLAMMATION of the pulmonary parenchyma of the bronchia has no appreciable influence on the development of tubercles.—*Louis.*

ON THE TREATMENT OF

COMPOUND FRACTURES,

AND

OTHER SEVERE INJURIES, WITH MERCURY.

By M. W. Hilles, *Esq.*

The numerous instances in which compound fractures have hitherto proved destructive, either to the life or limb of the sufferers, incontestably prove that something is still deficient even in the modern treatment of these accidents.

If the most violent of these injuries were alone followed by dangerous symptoms, the truth of the above position might be questioned, but when we so frequently meet with the most simple baffling all the attempts of the surgeon to procure a restoration to health, we are compelled to acknowledge, however unwilling we may be to do so, that the remedial means at present adopted, are but ill suited to the attainment of the objects we have in view.

It is true that many cases of compound fracture present themselves which are wholly beyond the power of art to remedy, and in which we are compelled to have recourse to a dangerous operation, that of amputation, as the only means left us to preserve the life of our patient; nay, many that prove fatal without leaving it in our power to adopt this painful alternative.

The nature of these cases is at once evident to the practitioner: they are, extensive fracture of the bones, with a corresponding destruction of the soft parts; fractures complicated with a wound of the principal vessels of the limb, such as the femoral artery, in the thigh, the posterior and anterior tibial arteries, in the leg, with other cases unnecessary to detail.

As such cases, from their nature, preclude all hopes of a cure, even by the most judicious treatment, I shall not consider them, but proceed to those cases of compound fracture, which present no such complications, and yet are, too, often followed by the loss of the limb or life of the patient. How frequently does it occur that a healthy individual is received into hospital with a compound fracture of one of the bones of the leg, in which the bone is simply fractured, and the integuments alone divided to a trifling extent, and yet, notwithstanding the use of splints, washes, leeches, &c., indeed all the remedies that the most skilful can suggest, violent inflammation appears in a few days, and gangrene results.

We are too apt to attribute this unfavourable termination to an idiosyncrasy on the part of the patient, but is not this an attempt to conceal or justify our own inefficiency? and does not the idiosyncrasy, if I may be allowed the application of the term, rest, not with the patient, but with our remedies?

The immediate cause of the gangrene, in these cases, is, almost invariably, violent inflammation of the parts, with a corresponding inflammatory state of the constitution, produced, in general, by the injury done, and frequently, no doubt, aggravated, if not called into action, by a too great predisposition in the constitution to take on the inflammatory action,—a state, both local and constitutional, which we have been hitherto generally speaking, unable to resist.

Under such circumstances I would suggest the adoption of the use of mercury, to be administered to the patient in small doses, say two or three grains of calomel, with a corresponding quantity of opium, twice or three times daily, commencing immediately or shortly after the receipt of the injury, so that the constitution may be affected by it to a partial extent, at least, before the usual time for the appearance of the inflammatory symptoms.

When we reflect on the powerful effect which this medicine possesses in not only controlling inflammation when its has made its appearance, but in preventing its occurrence in cases where it is to be reasonably expected, we shall at once perceive that there are some grounds for its adoption.

As an example of its efficacy in controlling inflammation, we may adduce the beneficial effects produced by its exhibition in cases of peritonitis; in preventing inflammation, the results that follow its administration in wounds of the eye, injuries of the brain, &c.

It is unnecessary for me to enter, here, on the consideration of the mode of action of this remedy; however anxious I may be to justify practice by theory, and thus pass from the empiric to the educated practitioner, I feel that I should, by so doing, introduce irrelevant matter, that would tend rather to embarrass than elucidate the question under discussion.

In recommending the *use* of mercury in these cases let it not be supposed that I would advocate its *abuse*. Independently of the local injury there are many circumstances that would render its adoption not only useless but injurious. Thus if the inflammation have already set in violently, so as to promise a rapid termination, I question much if the exhibition of mercury would not expedite, if not induce the gangrene.

If the patient be of a broken-down constitution, or far advanced in life, or of a generally bad habit of body, its adoption would, in all probability, prove prejudicial; here we should rather have recourse to those remedies which support; as the gangrene is more likely to be caused by a want of power, than by an increased action in the part.

There may be other circumstances which would forbid the us of mercury in com-

pound fractures, but the selection of them must be left to the judgment of the practitioner, who will here, as in all other cases, take into consideration the age, sex, and constitution of the patient, and not blindly rush into the adoption of a practice, however *novel* it may be, without an exercise of that discretion which always marks the judicious practitioner.

Some will, perhaps, say these views are theoretical. I am happy to reply that they are not; indeed I will most frankly acknowledge that they were first suggested to me, I may say accidentally. A patient, many years since, came under my notice, who had received a severe injury of his hand, the soft parts, tendons, &c., were extensively lacerated, and if I recollect well, the bones fractured. So severe, indeed, was the injury, that the surgeon in attendance hesitated if he should not perform amputation, but at length decided on making an effort to save the hand. As, however, from the nature of the accident, tetanus was to be apprehended, he ordered what he considered ante-tetanic pills, composed of calomel and some other ingredients. Never, I may safely venture to assert, have I seen a more rapid recovery; the parts healed up and the patient was discharged in a few weeks, without a single untoward symptom.

This, it will be remarked, is but a solitary instance, and cannot be considered as sufficient to establish a rule of practice; I only give it as such, and expect it only to carry that force which it accordingly is entitled to.

The foregoing is somewhat supported by a case of severe injury, that came more recently under my notice. I was requested by a medical friend to see with him a patient who having fallen from a scaffold, had received a contusion on the right side, and was then labouring under symptoms of ruptured intestine. As we suspected that such was the case, calomel was administered with a view to prevent the spreading of the inflammation that was likely to ensue. The following day the patient was much better, until a purgative draught was given by the direction of another surgeon, after which the violent symptoms returned, and the patient died in the course of the evening. On an examination of the body the ascending colon was found ruptured, and the contents of the intestine extravasated into the abdominal cavity.

There are some who would object to the exhibition of mercury in cases of ruptured intestines, fearing that this medicine would prevent the effusion of lymph so necessary to repair the injury done; this objection does not rest, I consider, on any practical observation.

Let it not be supposed that I advocate the administration of mercury, in all cases of compound fracture, to the production of *profuse salivation*; no! such an extreme is rather to be guarded against as tending to debilitate the patient, and so render him unable to bear up against the numerous and trying calls which an injury of the kind makes upon the constitution; indeed I would say that few cases will require the medicine to be pushed as far even as moderate ptyalism; as I have frequently observed that mercury arrests the local inflammatory process even before its effects on the constitution have become manifest.

The use of mercury may prove beneficial in many other cases of severe injuries besides those of compound fracture.

MR. LISTON'S IMPROVEMENTS OF MR. M'INTYRE'S FRACTURE APPARATUS.

To the Editor of THE LANCET.

SIR:—In THE LANCET of May 5th, are some observations by Dr. Wright on my description of the advantages of the modification of M'Intyre's apparatus, applied to fractures of the tibia and fibula by Mr. Liston, of the North London Hospital, in reply to which you will much oblige me by giving insertion to the few following remarks.

First.—Dr. Wright, in treating of my remarks on the advantages of Mr. Liston's apparatus containing a space for the heel, leads us to infer that the apparatus of M'Intyre contains a similar space. The instruments of M'Intyre, which were used in the North London Hospital previously to the introduction of Liston's, certainly contained no space for the heel. Some of these were brought over from Edinburgh by that gentleman, others were procured in London. They were merely hollowed out a little in the region of the heel, by the protrusion backwards of the plate for a short distance above the foot-piece; but none have I seen with a distinct space, the continuation of the plate *posteriorly* being entirely broken off. The effects of pressure upon the heel we have repeatedly observed with that apparatus, and they were distinctly marked in the case of Toms, in whom the ulceration was extensive, and proved tedious in healing, which I have included in the list of cases appended to the Essay.* The tape affixed to the sock is undoubtedly useful in preventing undue inclination of the foot to either side, and consequently preventing deformity; but it can scarcely be deemed efficient in *entirely* detracting from the pressure of the heel; at least such has been the experience in the management of a vast number of cases; and to obviate this difficulty Mr. Liston contrived this part of the apparatus, which has been described, and which has been found to answer exceedingly well. If there be a variety of the appara-

* See LANCET, October 21st, 1837.

tus originally invented by Mr. M'Intyre, exactly like Mr. Liston's modification in this respect, it has been unknown to the latter gentleman.

Secondly.—According to our experience, the original apparatus has frequently produced considerable inconvenience behind the knee-joint, even under any adjustment of the pillow. When the instruments which we have had in use have been flexed, the angle at the knee-joint has been very acute, and has produced very inconvenient effects *through the pillow*, however bulky it has been made in that part, and adjusted to the form of the limb. None of this inconvenience has been observed with the new splint, neither do I clearly see that it would not be as applicable to fractures of the femur as the original apparatus, provided a longer thigh-piece were attached; but in the North London Hospital it has not been applied to these cases, the method of treating them by means of the long splint being found much more efficient.

Thirdly.—On the treatment of fractures of the femur, I will merely remark, in the present place, that the plan pursued by Mr. Liston has been found highly satisfactory in every case. Dr. Wright's statement, that the double-inclined plane plan is "equally effective and much more easy to the patient than the long straight splint" is certainly not in accordance with the extensive experience of Mr. Liston; and my careful, but more limited, comparison of the two methods of treatment will induce me to reject the double-inclined plane in the treatment of these cases under my care. For a description of the application and advantages of the long straight splint, I will refer the reader to the valuable work on "Practical Surgery" by Mr. Liston, lately published, and to the first part of my Essay.* It is to be regretted that this method of treating fractures of the femur is not more generally known, and even that the double-inclined plane method is not either more generally known to, or that its advantages are not acknowledged by, some older surgeons practising in the country. A case of deformity from fracture of the femur, treated a few weeks since on Pott's plan, came under my observation a few days ago, when I heartily felt for the patient, who had been, either from ignorance or prejudice, rendered a cripple for life.

Fourthly.—I am aware that the foot-piece in the original instrument can be flexed, or extended, at pleasure; but it has been observed, that its attachment by means of the pin perforating the longitudinal plate posteriorly is not so firm as in the arrangement of this part in Mr. Liston's apparatus, and it certainly is not so readily moved from hole to hole, as slid along in the openings for the purpose on the side of the new apparatus.

Fifthly.—The transverse plate, at the extremity of the instruments which were in use in the North London Hospital, were fixed, and the consequence was, that when the limb was raised above the level of the bed, its posterior edge only rested on the block, unless the latter were bevelled off for the purpose of allowing the whole of the under surface of the plate to incline upon it.

Sixthly.—Under this head the chief advantage upon which stress is to be placed, is the much less expense of the new apparatus. On applying to Sheldrake and Co., it will be found that a *complete set* of the new apparatus, consisting of the requisite sizes for *all* persons, may be purchased for little more than the expense of a single instrument of M'Intyre's original invention. Even if the instruments were equally useful, this is a very great desideratum; but I contend that several of the advantages of the modification which have been described, render it more efficient and valuable than the original apparatus. Mr. Liston made several trials of sheet iron, screws, &c., of various strength, which he applied to fractures happening in individuals of full size and great strength, and spoiled a great number of instruments before he determined on the apparatus which is now manufactured by Sheldrake and Co., and in which are found combined the advantages which have been enumerated, being introduced to the public. Undoubtedly the reduction of price of the apparatus greatly depends on the sliding thigh-piece being abstracted, and the joint at the knee being less complicated. It would be well if the maxim of Dessault,

"La simplicitée d'une operation est la mesure de sa perfection,"

as quoted in Mr. Liston's "Practical Surgery," were more fully carried out in the construction of surgical instruments. I will admit that the instrument is deprived of a large share of its *intended* usefulness, inasmuch as the apparatus was originally designed by Mr. M'Intyre to be applicable to fractures of the femur. As this involves a disputed point in the treatment of this accident, it must be left to the impartial observation of surgical practitioners to decide on their relative merits.

Lastly.—I feel obliged to Dr. Wright for the observations which have elicited the present communication, and trust he will receive these few remarks in the same amiable spirit in which his own were offered. The subject is an important one, and should be fully and impartially investigated in all its bearings; and we are effecting good by making more generally known the very excellent principles of treating these injuries, included in the plan originally adopted by Dr. Wright's late friend, Mr. M'Intyre, and

* See LANCET May 20th, 1837.

more lately modified by our eminent teacher Mr. Liston; for after all, it is a lamentable fact, that in many parts of the country, the state of surgical science is nearly half a century behind hand. The influence of a periodical so widely circulated throughout the country as THE LANCET, has been, and will continue to be, prodigious, in affording individuals who have ceased to be connected with the schools, the temples of science, the means of keeping pace with the rapid progress of medicine and surgery.

In the Number in which is Dr. Wright's communication, I find inserted an interesting case of fracture of the tibia and fibula, treated without splints, by Mr. Radley. My remarks on the arrear of surgery in some parts of the country do not apply to this gentleman, who has very strenuously contended, in several lengthened and interesting communications which have teemed with declamations on most of the received plans of treating fractures, for the efficiency of treating them without splints. As has been before stated,† I have seen a few cases of fracture of the tibia and fibula treated without splints, and the results have been very satisfactory; but that individuals with fracture of the femur are easier without than with the long straight splint, is most decidedly contrary to my own observation in all such cases, as I have expressly remarked in the Essay above referred to.

In conclusion, pardon me, Sir, for intruding thus far on the pages of your Journal. In a short time I may, perhaps, have leisure to transfer from my case-book to your pages an interesting case of strangulated inguinal hernia, in a very aged female, which came under the care of Dr. Witt and myself, in which I returned the intestine, stripped of nearly a couple of square inches of its peritoneal coat, and removed a large quantity of omentum, followed by recovery. I am, Sir, your obedient servant,

T. HERBERT BARKER,
Late House Surgeon to the North London Hospital.

Bedford, May 21st, 1838.

TETANUS AFTER DELIVERY.

To the Editor of THE LANCET.

SIR:—I beg to transmit to you the details of a case of tetanus after delivery which lately occurred in my practice. By giving an insertion you will confer an obligation. I am, Sir, your obedient servant,

JOHN FINEGANE, M.R.C.S.

Nenagh, County Tipperary, May 13, 1838.

On Friday night, the 22nd of September last, I was called upon to visit the wife of —— R——, residing at Rilfin, three miles from town, who was in her fifth confinement. There was much flooding during the day; on making an examination, per vaginam, I found the placenta attached to the cervix uteri; having administered an anodyne draught I gradually introduced the hand, and separated a portion of the placenta, then ruptured the membranes, and delivered the child (still-born) in the usual way; the placenta came immediately after. She complained of after-pains, which were relieved by tinct. opii gutt. xxx., aq. cinnamon, ℥iss. Next day (Saturday) she had some pain at the lower part of the abdomen, which yielded to fomentations and ol. ricini unciam. On Monday and Tuesday she continued remarkably well; on Wednesday evening she was seized with a violent rigor, which continued for about two hours, and then terminated in a profuse perspiration; next morning (Thursday) she had a slight return of the rigor. I was sent for on that day at 7, P.M.; she complained of stiffness about the articulation of the jaw, with pain in the back part of the head and neck. I took from the arm twenty ounces of blood, which she said relieved her a little; not having any other medicine convenient I gave castor oil ℥iss., which moved the bowels freely. On leaving her for the night I ordered one of the following pills to be given every second hour:—*Calomel*, grs. xxxvj.; *opium*, grs. xij. Divide in twelve pills. On the following morning (Friday) I was sent for at five o'clock, when I found the lower jaw completely fixed, and a decided case of opisthotonos, the body resting on the heels and occiput. Any attempt to take drink excited violent convulsions. Frictions along the spine with strong embrocations, enemata of ol. terebinth., opium, assafœtida, and, finally, tobacco, were administered without the least effect. The poor sufferer died at ten o'clock. I regret that a post-mortem examination would not be allowed.

† See LANCET, May 20, 1837.

DR. LITTLE'S CASES OF CONTRACTED FEET.

(Continued from p. 259.)

CASE V.

TALIPES VARUS ACQUISITUS.

Contraction of the Gastrocnemii from (the same cause as Case IV.) Abscesses in the back of the Leg, and Necrosis at different parts of the Tibia and Fibula, chiefly of the latter Bone.—Cure after division of the Tendo Achillis.

July 27, 1837. Miss ——, ætat. 24, daughter of a medical friend, informs me that some disease of the right leg, supposed at first to have been rheumatic inflammation, commenced nearly nine years ago, and continued four years, during which period she had numerous abscesses in different

parts of the back and outside of the leg, from several of which large pieces of bone were removed. When the wounds had entirely healed, and she had recovered her strength, she found herself unable to touch the ground with more than the front of the foot, *ff* in fig. 3 (LANCET, March 31, 1838, p. 15), the heel being drawn up from the ground between two and three inches, and her walking rendered consequently very difficult, which has continued so, as she says the great fatigue and perspiration after going half a mile are very distressing to her. The gentlemen who had attended her placed her under the care of a mechanist of repute, who undertook, by appropriate apparatus, to overcome the contraction of the calf (induced by the same immediate causes as are fully detailed in Case III.), and force the toe gradually upward, and the heel down to the ground. This plan has been persevered in by the almost daily attendance of the mechanist ever since, up to the present time, without any other benefit than that of having prevented the contraction from increasing.

The difference between the present state of this foot and that represented fig. 5, is, that the heel is drawn up much less, and the patient does not touch the ground equally with the ball of the great toe, and that of the little toe, but treads chiefly upon the latter, owing to the effect of walking having been to thrust the toes inwards, so as to constitute talipes varus. There exist, therefore, also, the external convexity and internal concavity of the tarsus,—the shortening of the distance from the posterior extremity of the heel to the metatarsal articulation of the great toe,—and the high relief occasioned by the relaxed abductor pollicis, characteristic of this grade of T. varus.

August 1. I divided the tendo Achillis to-day, in the manner already described, assisted by my friend Mr. Kingdon. The recoil of the severed ends of the tendon was distinctly felt and heard. The puncture was dressed with a strip of adhesive plaster and bandage, and the limb as usual laid in its deformed position upon a common pasteboard splint.

Second day after the operation. The dressing was removed, and the puncture found to have united by adhesion. On examining the limb I felt a small string, or bridle, remaining undivided at the part where I had cut the tendon. It may have been the plantaris tendon, as it was upon the inside of the tendo Achillis, or a strip of fascia, or a small band of old adhesions. I divided it by a very minute puncture, and placed the limb, after dressing it, upon Stromeyer's foot-board, without exercising any extension.

4th day. The cord of the apparatus tightened, for the first time, so as to keep a little tension upon the joint.

7th day. The extension has been carried on slowly, and without inconvenience to the patient, except from the pressure of the apparatus against one of the corns which cover that part of the sole upon which she trod formerly. A friend of the patient undertook this morning to remove the projecting part of the corn which occasioned the pain, in doing which he unfortunately wounded the cutis; this little accident has occurred most inopportunely, as the tenderness which may result therefrom will prevent me from persevering with the use of the apparatus to rectify the position of the foot until it has perfectly healed.

10th day. The apparatus has continued to be worn, but the anticipated inflammation around the corn has required the application of poultices, and prevented any progress being made. The pain in the sole is subsiding, and the little wound made through cutting the corn is healed; the extension, therefore, is now to be pursued.

11th day. Patient has complained much of pain in that part of the foot covered with the corns; so much, indeed, did she suffer during the night, that being summoned to her I was obliged to unloose the apparatus, although it was by no means tightly applied. The slight, though constant pressure, had sufficed to re-excite inflammation of the skin around the corns. In order that the pressure of the foot-board may hereafter be distributed equally over the entire sole, I have placed between it and the foot-board a temporary air cushion, which I have prepared by introducing one portion of the gut of a bullock within a second portion of the same, tying the double intestine firmly at one end, then inflating it and securing it at the other. I used the intestine double to prevent its stretching, so as to become too flaccid for my purpose, or its bursting from the pressure. This contrivance was no sooner applied than she expressed herself totally relieved from soreness and pain; she could even bear immediately a much greater pressure than I thought necessary for the gradual forcing upward of the toes; in short, she was rendered more comfortable with the apparatus on than without it, as the elastic uniform pressure against the entire sole eased her at once from the burning pain of the inflamed skin around the corns.

12th day. My patient is delighted with the progress she is making, as the heel has visibly descended, and I that my experiment with the air cushion has succeeded so perfectly. To-day I have substituted for the inflated intestine a properly made Macintosh caoutchouc air cushion. I have directed her to walk about the room, so as to assist the thrusting down of the heel, by throwing the weight of the body upon her

foot. All pain in the corns is gone, although she is beginning to complain of the joint. Spirit lotion to be applied constantly to the ankle.

16th day. The foot-board has been very well borne since last report; I have removed it to-day, and allowed her to walk across her apartment, the entire sole and heel of the foot touching the ground, without any apparatus; I have, however, reapplied it, intending to bend the ankle to the extent that the foot may form an angle with the leg as acute as natural.

22nd day. The foot is now bent almost as much as is necessary to ensure perfect walking by-and-by. I have discontinued the foot-board, and have applied instead a lighter instrument of my own, which combines the perpendicular elastic springs of the Scarpa shoe, with a certainty of bending the joint to the natural extent, by means of a screw, acting against the spring as a lever; she can, therefore, walk about with facility and ease. All the inconvenience she has now is from tenderness of the ligaments of the joint which have been stretched.

It is unnecessary for me to give here any more regular reports from my note-book; how this case proceeded its farther management may be understood from the previously described cases.

Six weeks after the operation she walked about in a common shoe, the ankle joint possessing the natural extent of motion; at the end of two months, when all œdematous swelling had subsided, the union of the tendo Achillis could be felt to be perfect, and by means of the gastrocnemii, tib. post., &c., she could straighten the foot upon the leg, and contract freely the anterior tibial muscle, and raise the foot; the peronei had also recovered their power, affording, therefore, a strong contrast with the inactivity of the latter muscles in those cases of club-foot resulting from their paralysis. She suffered occasionally, during the very severe cold weather, from pain in the ankle-joint, which for a short time caused her to walk rather lamely. Her gait progressively improved until four months ago, when Mr. Kingdon informed me that she was walking about as well as a person who had never had any lameness.

The following extract from a communication received from her, dated March 16, 1838, previously to her leaving town, and showing her foot to Sir A. Cooper, who was much pleased at the alteration of it, and the improvement of her general health, will best show what is her present condition:—

"My foot is so delightfully well now, that I am quite anxious to show it to him (Sir A. Cooper); I have repeatedly walked five and six miles without the slightest inconvenience; and I cannot conclude this without once more expressing my gratitude to you for having afforded me so much comfort and ease in walking to which I was so long a stranger."

I select the opportunity of the publication of this case to make a few observations relative to the comparative utility of the mechanical and the chirurgico-mechanical treatment of these and similar contractions. No unprejudiced person, after reading reports of congenital and non-congenital cases of club-foot having been cured after the division by the scalpel of the cause of the deformity in a few weeks, whereas as many years' use of instrumental means are too often insufficient for even a partial cure, unless commenced in very early life, will doubt to which method the preference is to be given when properly conducted; yet as from an incautious mode of proceeding and neglect of discrimination in the necessities of each particular case, difficulties may arise, some of which may even threaten a total failure, I shall not be surprised, as, indeed, I have long since mentioned elsewhere, to hear of cases the result of which may reflect very little credit upon this great improvement of modern surgery, of cutting tendons and curing contracted limbs after the method of Stromeyer.

The reader must not judge disparagingly of the operation in his comparison, because all the cases which have hitherto been published in this Journal have not been of the highest grade of deformity; but for that reason they illustrate the better the superiority of the chirurgico-mechanical over the simply mechanical treatment, for if the latter will not succeed in the slighter forms of disease, how much less will it avail in the severer cases. I have, besides, thought it advisable to detail first the treatment of simple elevation of the heel (T. equinus), or combined with slight turning inwards of the toes (slight T. varus), in order that my readers may profit the more, and be able to follow my example, and improve upon it by experience.

It is, perhaps, hardly fair to adduce many cases of club-foot cured after the operation, in which long-continued mechanical treatment is said to have failed, as the latter, it must be admitted, labours often under very serious disadvantages, such as the patient, most frequently of tender age, becoming intractable from uneasiness and irksomeness, if not from pain, during the continued wearing of an appropriate apparatus; the parent, albeit, in good pecuniary circumstances, being harassed by the complaints of the child, tired of the expense of instruments, and the necessary attendance of the mechanist, and often witnessing, after months' or years' perseverance, only a very slow amendment, loses courage ultimately, begins by leaving off the child's apparatus at night, and finally discontinues it altogether; or, if the case have proceeded more

rapidly favourable, in his or her anxiety to see the child walking about unburthened with an iron, lays the latter aside prematurely, and is di-heartened at beholding the disease return to a greater or less extent. During all this time the medical attendant of the family is rarely consulted, as the matter is often looked upon as derogatory to his professional dignity; he loses sight of the case, therefore, and the parent at length relinquishes *curative* means, and feels himself obliged to be satisfied with letting his child wear, during the day-time, that iron which assists him most in his walking, and thus the sufferer goes on to the end of his days. If the parent be poor, the mechanical treatment is very frequently out of the question altogether.

These are the disadvantages which the mechanical treatment labours under, but they would be its objections were it admissible that the majority of contracted feet were ultimately curable by it. In this young lady's case, after the cessation of the disease in the leg, which had been the cause of the contraction, she was placed under the care of a mechanist of repute, who was assisted in his use of instruments and daily manipulations of the joint, by a truly feminine patience and perseverance, engendered partly by the very natural desire at her age of recovering the use of her limb, and unthwarted by having any out-of-door occupation; yet from her own information, and that of her former surgical attendants, I learned that there was no alteration in the form of the foot obtained, the only benefit having been the counteracting the tendency of the toes to twist inwards, and more particularly the preventing the contraction from becoming worse, as it might otherwise have reached the extent represented fig. 5. It will not be objected to the chirurgico-mechanical method, that although it requires but a comparatively short time to effect a cure, it is attended during the treatment by much more uneasiness, irksomeness, or even pain; for were it admissible again, that the certainty of cure were ultimately equal under both methods of treatment, which it is not, for reasons which it would now require too much space to demonstrate, the chirurgico-mechanical would be preferable, as the disadvantages which the simply mechanical plan has to encounter, do not attend in any proportion the former; for parents during the cure of contractions, as during the treatment of most diseases, if they perceive unequivocal and speedy amendment, and patients, also, if of an age to judge for themselves, are not discouraged by the occurrence of pain, nor grudge trouble and perseverance. For the purpose of farther satisfying myself of the value of simply mechanical treatment, I have recently removed the deformity in some cases solely by its means, and Stromeyer has done the same, and have even completely removed the deformity in a child of ten months old, who was brought to me by his father, a surgeon, in order that I might divide the tendo Achillis, through my having cured his eldest son, ætat. 16, by the operation, whose case had resisted all his father's exertions during the earliest years of his life. Except in slight and infantile cases, the time and exertion expended is so great, the pain and worry to a child so considerable, that ultimately the operation must be resorted to; and often, if the deformity be relieved without it, the surgeon cannot promise that the disease will not return unless the wearing of an instrument be long persevered in.

The difficulty which arises from pressure requiring to be made against the sole of the foot, which may be painful from clavi covering the projecting bones, or from an inability to distribute the pressure over a sufficiently large surface, to enable it to be borne, was one of the most serious I had to encounter, previously to my resorting to the air-cushion. The use of this was suggested to me by my friend Mr. Davey, of Great Ormond-street, with whom I had attended the following very severe case.

Case VI.

CONGENITAL ADULT T. VARUS,

In which it was necessary to divide the Tendons of the Gastrocnemius, Tibialis Posticus, and Tibialis Anticus.

The rectification of the position of the foot went on *à merveille*, so that at the end of seven weeks he trod upon the entire sole and heel, with no part of which he had ever touched the ground before the operation, having walked upon a huge bump of adipose, ligamentous, and cartilaginous matter, which had been effused upon the dorsal surface of the os cuboides, to protect the parts from pressure. During the wearing of the extension apparatus the chief pressure had been borne, after the form of the foot had been partially remedied, by the inferior extremity of the fifth metatarsal bone, the skin covering which had suffered consequently in its vitality, so that when I allowed the patient to walk about unlimitedly, the skin gave way at that part, and a sore, tedious and troublesome to heal, ensued. The foot necessarily relapsed considerably, as all retentive apparatus was obliged to be taken off, although not so much as was to be expected; the wound subsequently healed firmly, and he is now walking about, the deformity almost entirely gone, and daily decreasing. Now the disagreeable accident which occurred in the progress of this case, just as I had congratulated myself with a cure, speedily completed, cannot occur again if the air cushion be resorted to; I have used it with

the greatest advantage in twenty cases since I first applied it, and I am sure that several patients would never have borne the pressure necessary to overcome the resistance of the ligaments of the ankle-joint without it. This simple contrivance, like Dr. Arnott's hydrostatic beds, will render amenable to medical skill cases which would have otherwise remained incurable. I find from the patentees, Messrs. Macintosh and Co., that other gentlemen are appreciating the benefits of my recommendation by resorting to them for these cushions.

April 26, 1837.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 22nd, 1838.

Dr. MERRIMAN, President.

A SUCCESSFUL PLAN OF ARRESTING THE DESTRUCTION OF THE TRANSPARENT CORNEA FROM ACUTE PURULENT INFLAMMATION OF THE CONJUNCTIVA.

By FREDERICK TYRRELL, *Surgeon to St. Thomas's Hospital, and to the Royal Ophthalmic London Hospital,*

THE author having often had occasion to witness the insufficiency of the means commonly resorted to in the treatment of acute purulent inflammation of the conjunctiva, to arrest the sloughing process in the transparent cornea, was induced to study the disease most attentively, in the hope that a knowledge of the mode in which the morbid change takes place, might suggest some adequate means of controlling it. In this hope he was not disappointed, having devised a remedy, the success of which has been sufficient, in his opinion, to warrant him in offering it to the profession. The cornea being, in the author's opinion, almost altogether dependant for its supply of blood upon the conjunctival membrane extended over it, he conceives it to be demonstrated that, in the high degree of chemosis attending upon acute purulent inflammation of the conjunctiva, its supply of blood must be cut off by the mechanical strangulation of its vessels, from which condition sloughing of the whole or of a part of the cornea (according to the degree of strangulation) must necessarily result. The plan of treatment, therefore, recommended by the author, consists in dividing the fold of conjunctival membrane, which, by its reflection, constitutes the chemosis, in order, by relieving the distension of its vessels, to diminish the degree of chemosis. The novelty of the plan consists, not merely in the division of the conjunctiva, which has been long practised by others without the least benefit, but in dividing it in a *radiated* manner, from the centre of the cornea towards to sclerotic margin, in the intervals between the insertions of the recti muscles, whereby the large trunk of the vessels supplying the conjunctiva are avoided. The method, hitherto pursued by many surgeons, of dividing in a circular direction parallel to the margin of the cornea, not only produced no advantage, but was even prejudicial, by cutting off, more perfectly than before, the vascular supply from the cornea. Several cases are related, in which this practice was adopted in persons presented to the author, some in a very advanced stage of inflammation, and after sloughing of the cornea had actually commenced, in which the morbid processes were immediately arrested by its adoption, and the paper concludes by claiming for it the attention of the profession on the following grounds:—That it is safe and easy of performance; that it is more efficacious than any plan hitherto proposed; that it prevents the necessity of active depletion, or the adoption of any more general or local measures, likely to injure the general health or to produce severe suffering.

Mr. DAVIS was two years in Egypt with the British army, and saw many cases of chemosis. The means resorted to at that period consisted of general bleeding, opening the temporal artery, and dividing the conjunctiva. Army surgeons were not at that time provided with leeches or cupping instruments. He had divided the conjunctiva in hundreds of cases, and so far as that experience went, the proceeding was a most unsatisfactory one; the reason why it was so had now been explained by Mr. Tyrrell. General bleeding, as a means of treatment, he had also found most unsuccessful, the the disease spreading with a frightful rapidity; he had seen cases in which the cornea had been destroyed in two hours after the first application of the patient to the surgeon. Directions were given that any man who had a sensation of something gritty in his eye, should at once apply to the hospital, when an application of tincture of opium was made (the vinum opii not being then in use), and hundreds who thus early applied, and were subjected to this treatment, experienced no further inconvenience, a profuse flow of tears being produced, and the symptoms subsiding. He had himself experienced thirteen attacks of the disease, eight of which had occurred to him in this country. It might not now be of much practical importance to mention, but it was a curious fact, that scarcely a person died of dysentery in whom, during the last moments, ulceration of the cornea did not come on.

OBSERVATIONS ON NÆVI, THEIR STRUCTURE AND TREATMENT.

By T. B. CURLING, *Esq., Assistant-Surgeon to the London Hospital.*

The object of the author in this paper was to point out the advantage of the practice of treating nævi by passing setons through their substance in the manner first proposed by Mr. Fawdington, and afterwards recommended by Mr. Macilwain, in a case published in vol. 18 of the Society's Transactions. He relates several cases in which the practice had been pursued by him, with the effect of entirely removing the disease, without leaving any scar behind. The sutures are passed with a common sewing-needle, carrying a doubled silk, and are retained in the tumour till sufficient inflammation shall have been excited to cause obliteration of the vessels, after which the tumour soon shrinks and disappears. The practical part of the paper is preceded by much interesting speculation on the structure of nævi, which our limits do not permit us to enter into at length.

Mr. B. PHILLIPS said the author of the paper had advanced several opinions respecting the low vitality of nævi; he did not think the illustrations he had given of these opinions were good. Nævi were sometimes peculiarly susceptible to particular kinds of stimuli. He (Mr. P.) had seen two cases in which this was well demonstrated. One of these, which was about the size of a sixpence, had three or four points of vaccine matter inserted into it, and in the space of two or three weeks the tumour had increased to the size of a half-crown. In another case in which the same proceeding was taken the development was equally great. Regarding the plan of treatment recommended by the author, he had seen three cases in which setons were passed and were quite unsuccessful in promoting a cure. In one of these cases the patient was under the care of Mr. Mayo, at the Middlesex Hospital, a nævus as large as a turkey's egg was situated at the angle of the lower-jaw; a large ligature was passed five or six times through the tumour, great inflammation was produced. The threads were allowed to remain in nine or ten days, at the end of which, on removing them, portions of the tumour around were consolidated, but a cure was not effected. He had seen the same proceeding employed in two other cases in which the tumours were not so large, the same effect was produced. Regarding the various modes of operating on nævi, the author had omitted to mention the plan recommended by Dr. Marshall Hall of breaking up the network of vessels, by passing needles in various directions through the tumour; a similar plan of proceeding having been followed by Lallemand. The author had also omitted to mention a plan pursued by Mr. Liston with much success in cases of nævi—the treatment by incision and ligature. In one case in which this proceeding was adopted by Mr. Liston, the child was three years of age, and the tumour occupied the angle of the eye; the little patient had been under three operations, the ligature was used twice, and the knife once. Sir Astley Cooper had performed two of these operations. Mr. Liston made a crucial incision over the tumour, and dissected the flaps back to its base round which ligatures were applied, and the tumour was thus entirely destroyed.* In another case in which the tumour was over the thyroid body the same treatment was effectual.

Mr. CURLING, in his paper, had met the grounds of objection, as mentioned by Mr. Phillips, to the opinion that nævi possessed a low degree of vitality. In speaking, as he had done, regarding the success of the seton in cases of nævus, he had been warranted by his own experience, and that of other gentlemen to whom he had spoken on the subject, who had found it more successful than other plans. It was a mode of proceeding which did not in any way affect the life of the patient, and was not followed by deformity, scarcely a case having come to his knowledge, in which it could have been ascertained that any operation had been performed. In one case which Mr. Phillips had alluded to as having been treated by the seton, it would appear that consolidation of the tumour to a certain extent, had taken place; had the plan of treatment been persevered in, the whole of the tumour would probably have become consolidated and the cure effected. He had alluded to Dr. Hall's plan in his paper; he had employed it in several cases, but certainly not with success; he should be very unwilling to rely on it in a subcutaneous nævus. Lallemand's plan was not similar to Dr. Hall's, as the former not only used pins in the same way as the setons were employed, but also had recourse to pressure.

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* This case, with others of a much more formidable character, in which the same proceeding has been followed by complete success, have already been fully detailed in THE LANCET, and in these cases there is no subsequent deformity. The last case reported, in which an immense nævus was removed by this operation, has terminated in a complete cure. In the case alluded to by Mr. Phillips nine or eleven operations had been performed.—*Rep.* LANCET.

THE LANCET.

London, Saturday, June 2nd, 1838.

A very long Address, presenting the following title, has been placed before us, with a particular injunction, on the part of its authors, "to preserve it for the purpose of future reference," a request with which we shall most carefully comply :—

"General Remarks and Explanations, in reference to the Report of the Assistant Medical Commissioners of the Irish Poor Inquiry, on County Infirmaries; with Observations on the Irish Medical Charities Bill, as introduced by Mr. French and Mr. Serjeant Ball; by the Surgeons of the County Infirmaries of Ireland."

This document, most probably drawn up by Dr. Jacob, as the agent of the Dublin College of Surgeons, has received the sanction and signatures of six and twenty individuals, namely :—

Wm. Thompson, M.D.,	Antrim Co. Infirm.
Alex. Robinson, M.D.,	Armagh,
Thomas Rawson, M.D.,	Carlow,
George Roe, M.D.,	Cavan,
Geo. W. O'Brien, M.D.,	Clare,
Simon Enright,	Clare,
William Galway, M.D.,	Cork,
George A. Nixon,	Fermanagh,
A. Veitch, M.D.,	Galway,
F. Crumpe, M.D.,	Kerry,
W. P. Geoghegan, M.D.,	Kildare,
Thomas Pack, M.D.,	Kilkenny,
George Pierce,	King's County,
William Hutchinson,	Leitrim,
George West,	Longford,
E. G. Brunker, M.D.,	Louth,
T. Dillon, M.D.,	Mayo,
L. Byron, M.D.	Meath,
A. K. Young, M.D.,	Monaghan,
John Jacob, M.D.,	Queen's County,
R. Lloyd, M.D.,	Roscommon,
R. P. Russel,	Tipperary,
H. H. Boxwell, M.D.,	Wexford,
Wm. Hamilton, M.D.,	Wicklow,
Robert Pentland,	Drogheda Infirm.
W. W. Heath,	Baltinglass.

We print these names because we are anxious to know something more of the physcological curiosities to whom they belong. The owners are evidently (from the statements and sentiments contained in their address) beings of a very singular breed, possessing very odd characteristics, and, as The Lancet is generally circulated throughout Ireland, we solicit information on their professional peculiarities and habits, and on the manner in which they became Surgeons of Infirmaries. Our readers in the sister country may enable us to lay before our medical brethren in England, much that is worth knowing respecting these peculiar individuals, the patronage by which they obtained office, and their proceedings as public functionaries. Nothing that is at all interesting respecting them should be omitted. There is no hurry necessary in communicating the intelligence. On obtaining the information which we expect to receive, we shall carefully weigh the various circumstances that should be considered in estimating the productions of these remarkable personages, and probably consider it worth while afterwards to teach them to be a little more just and accurate in their views, when discussing subjects of medical policy. We shall not be beguiled from this duty to our medical brethren in Ireland by any praise which the writers may have bestowed on ourselves, for the part we have taken as opponents of the Medical Charities Bill. It is perfectly true, we admit, that the Bill of last session met with the uncompromising enmity of The Lancet, and that by the "untiring exertions" of its Editor in Parliament that "destructive" Bill, as the Infirmary Surgeons designate the measure, was lost in the House of Commons. "We cannot conclude," say the subscribers to the Address,—

"We cannot conclude without expressing the obligations which we feel are due to those Members of Parliament who exerted themselves to protect us from the destructive influences of the Bill of last session, and particularly to one whose untiring exertions in our behalf, both then and now, can never be effaced from our recollection."

No ingeniously designed eulogies of this kind shall prevent us from bestowing the chastisement which these eulogists richly deserve, or induce us to lessen the severity of its infliction. We entertain too strong a feeling of disgust at the designs of the new denouncers of the Bill of *last* session,

who, until this moment, never were heard to utter one word in print against that "destructive" measure,—who, in fact, saw THE LANCET combatting, single-handed, its iniquitous clauses, without advancing one step to aid our "untiring exertions" on behalf of the medical profession of Ireland. It is perfectly true that to the exclusive opposition of this Journal the Bill of last session was rejected with anger and contempt by the British Parliament. The other Members of the House of Commons to whom the "obligations" of the profession in Ireland are stated to be also due, were awakened by our timely notices to the evil which was about to be inflicted on the medical practitioners of Ireland, by placing them under the exclusive control of the Poor-Law Commissioners. But for THE LANCET, that "destructive" Bill would have been *a law*. It is now too late for these men to come forward with expressions of gratitude for what was done in 1837. Not one step from our course shall we be moved by this sudden demonstration of thankfulness and affection, but our "exertions" as opponents of the Bill of 1838, will be directed as "untiringly" against that "destructive" measure, as they were against the Bill of 1837. The interests, independence, and utility of the great body of the medical profession in Ireland are not to be sacrificed to the cunning praises and designs of six and twenty surgeons of Irish County Infirmaries. We reject their approbation and eulogies because they are worthless.

We have neither time nor space at present to notice more than one other passage in the truly ignorant document which we are enjoined to preserve with so much care "for the purpose of future reference," and that one affords a useful illustration of the purely disinterested objects of these "officers" of Irish Medical Charities:—

"In carrying the necessary arrangements" (for providing for the establishment of additional institutions for the relief of the sick poor) "into effect, it is admitted by all *that the salaries of the existing officers should be secured*. This can only be effected by the addition, at the end of the 10th clause, of some such provision as the following:—'Provided always, that the establishment of such additional infirmaries shall be independent of the County Infirmaries *now existing* and *in operation*, the revenues of which shall be devoted, &c. &c.'"

We again request to be supplied with information respecting the characters and professional habits of the men who have shown themselves, in this Address, to be completely unacquainted as well with the sound principles of medical policy, as with the manner in which THE LANCET has treated the questions connected with the "destructive influences" of the former Medical Charities Bill. The communications of our correspondents in Ireland on this subject shall be usefully employed in the course of our still "untiring" opposition to all that is corrupt and mischievous in the *new* measure.

A PARAGRAPH in one of the London newspapers informs us that Dr. DICKSON, of Cheltenham, lately brought some charges against the governing Committee and Medical Officers of the Cheltenham Dispensary, involving accusations of mal-administration of its affairs, and the neglect and mistreatment of the patients. The charges being laid before the subscribers to the Dispensary, the medical officers, after some little time, resigned their situations, and the subscribers offered to appoint a special committee to investigate the truth of the statements. This Dr. DICKSON refused, objecting to the constitution of the committee, and demanding a public tribunal of twelve subscribers, six to be named by the Governors of the Dispensary, and six by himself, to elect their own president, conjointly. Assent was given to this proposal. After long debates at meetings of the subscribers, a gentleman of the name of BUNKITT was deputed to wait on Dr. DICKSON to communicate the compliance of the subscribers. In the mean time every species of warfare, elocutionary, literary, and epistolary, proceeded between the various parties. On presenting a letter

containing the assent of the subscribers to Dr. Dickson's demand, Dr. Dickson, on learning that it contained resolutions signed by the Chairman, and communicated by the Secretary of the Dispensary, Mr. Sherwood, refused to receive the epistle, alleging that he could hold no communication with Mr. S.,—who had "hissed" and otherwise affronted Dr. D., at one of the meetings. The letter was accordingly carried back again, and a great deal more discussion ensued among the subscribers. Dr. Dickson alleged, we understand, that in consequence of some disapprobation which had been expressed at his proceedings, at one of the meetings, and from the hesitation of the Committee to consent instantly to his proposition, he should at once "wash his hands of the institution." This declaration, it is said, furnished him with an excuse for now refusing to bring his charges before any Committee, whether one appointed according to his own suggestion, or any other. (The contents of the resolutions and letter were stated to Dr. Dickson by Mr. Burkitt.)* On learning the refusal of Dr. Dickson to open the letter, or to proceed with his charges, the following resolution

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* In a letter published in Cheltenham by Dr. Dickson, dated May 24, addressed "To the Subscribers and Governors of the General Dispensary," the following passages occur:—

"For three mortal hours I waited the decision of that meeting. In vain I told them I would consent to no other tribunal than that proposed by Mr. Williams—in vain I stated, that if they did not then meet me in that manner *I would wash my hands of the Institution for ever!* * * * On the spot I told them I saw no wish on the part of my opponents to adopt a fair or honourable course. From the moment the meeting rejected Mr. Williams's proposition they violated the faith with which they had pledged themselves to act justly—they voted white black—and who will assure me that they would not again do so when it might suit their purpose? Need I say from that moment I determined *coute qui coute* that nothing should again provoke me to put myself at the mercy of such a body of men. Returning to the bosom of my family, too happy to enter again upon those peaceful studies and pursuits which had for a space been interrupted by this ungrateful contest, I felt myself relieved from an office which nothing but the public weal could have induced me to take up. * * * As time crept on rumours of another general meeting reached me; nay, I could not avoid seeing it notified in the newspapers; but it could not concern me who had so publicly declared at their last meeting that I had done with them for ever! I was mistaken—on Monday last a sealed packet was placed in my hand by the apothecary of the dispensary, who came in hot haste to tell me it required an *instant* answer! 'By whom written?' I asked. 'By Mr. Sherwood, the secretary.' 'Tell that individual that with him I can neither have business, public nor private,' and I returned Mr. Burkitt the letter with its seal unbroken. I could not communicate with a person who had on that memorable meeting, with hat in hand, cheered on the myrmidons of Mr. Close, who hissed and hooted me whenever I opened my mouth. I was not long permitted to remain in ignorance of the contents of that packet. Mr. Eves forwarded to me a resolution, which its framers truly admit to be as extraordinary in practice, as it is altogether without precedent; a resolution inviting me to renew the disgusting contest before such a tribunal as Mr. Williams had proposed three weeks ago; or, in fact, any other that might suit me, my courageous opponents *having the full knowledge of my public declaration, that I had washed my hands of the Institution for ever!* To what straws will not drowning men cling? Whence flashed upon them the new light that twelve of your number could settle matters which on account of their gravity they had formerly, and with all formality, declared *could only be inquired into by the Judges of the land?* In the event of my being such a simpleton as to forego a position which nothing but their guilty fears conceded to me, did they, like Shallow in the play, hope my pistol might miss fire? In their three weeks of agony did they employ intimidation or bribery? Had they during the interval, tampered with the evidence? Did they anticipate aught from trick and chicanery? Perhaps they expected to find matter in the course of such proceeding *(as they have so often hinted)* whereupon they might found an action for libel! truth being, as they well know, in the present state of the law, actionable.—Alas for their ruined hopes."

The remainder of the letter, like some of the above extracts, consists almost entirely of declamatory expressions, and does not further explain the "reason" of Dr. Dickson's refusal.

was moved and carried unanimously at a general meeting of the subscribers:—

"That every facility having been offered to Dr. Dickson to bring forward, in a tangible form, his various charges against the medical officers of this Institution,—a facility, perhaps, unprecedented in a matter of a similar nature, and Dr. Dickson having declined to avail himself of it,—it is the opinion of this meeting, that the medical officers of this Institution are entitled to the continued and unlimited confidence of the governors and subscribers of and to this Institution, and to the support of a generous public; and that the medical officers be requested to withdraw their resignations."

We have but a few words to offer on these proceedings. If they be correctly reported, we think that Dr. DICKSON has acted in a very extraordinary and indefensible manner. The offer of the subscribers to allow Dr. DICKSON himself to appoint six members of the Committee of twelve, was fair and honourable in every respect.* This, we are bound to state, in justice to the medical officers, and it appears to us that the refusal of Dr. DICKSON to accept of such a proposition, ought to enjoin upon him profound silence with respect to the future government of the Dispensary, and the proceedings of its medical staff. Conduct of this description is calculated to inflict an irreparable injury on the cause of medical reform.

* The proceedings to which this and some other matters relate, are more fully explained in the following extracts from a report of one of the meetings, which we have just seen in the *Cheltenham Free Press* of May 26:—

Mr. EVES moved, that if Dr. Dickson objected to the nomination of six, he should have the election of the entire twelve from the body of subscribers. (Hear, hear.) [Mr. Eves is not one of Dr. Dickson's friends, but the advocate of the medical officers.]

The CHAIRMAN objected, and said the motion already passed was conclusive.

The following names were then selected on the part of the medical officers:—Mr. W. L. Lawrence, Mr. Fisher, Mr. Jerrom, Mr. Marshall, Mr. Bulgin, Captain Lloyd.

Mr. EVES persevered with his original proposition, that, in the event of Mr. Bold Williams's motion being rejected by Dr. Dickson, Dr. Dickson should have the nomination of the twelve.

The CHAIRMAN refused to put the motion.

Dr. M'CABE (one of the medical staff), said, that the meeting had no right to assume that Dr. Dickson would refuse.

Dr. GIBNEY (another medical officer) said, if Dr. Dickson refused the resolution already made, let him have twelve selected from the subscribers by himself.

Another desultory conversation took place as to the mode of communicating with Dr. Dickson.

The CHAIRMAN remarked, that Dr. D. might not receive the deputation, and that a note from the Secretary would perhaps be the more eligible.

It was finally agreed, that a copy of the resolutions, with the Chairman's name attached, should be forwarded through the Annual Secretary.

Another desultory conversation took place as to the mode of conveyance of the letter. Mr. Marshall was requested to convey it with Mr. Burkitt, when

Mr. MARSHALL declined, and said, he did not like the job. (Laughter.)

By a concurrent opinion it was determined that the public should be admitted as spectators, but not to take any part in the proceedings.

The carriage of the letter was finally committed to Mr. Burkitt, who volunteered the service, unattended.

EXAMINATIONS AT APOTHECARIES' HALL.

To the Editor of THE LANCET.

SIR:—I had some conversation lately with certain young men who had just passed the ordeal of "Examination" at Apothecaries' Hall, and who were, of course, full of that subject. I was particularly struck on this occasion with the profound remarks and sagacious inquiries of some of those sapient heads of the great pill shop of Blackfriars. A few nights since an interesting colloquy, nearly verbatim as follows, there took place. Its influence refreshes me now, like the showers of May that are yet falling.

Question. How much gamboge would you give a patient for a dose?

Answer. I should not, Sir, administer gamboge alone, uncombined with any other purgative; or at least it is not usual to give it alone.

Q. But how much would you give, if it seemed proper to prescribe it alone?

A. Why, about three grains, as a medium dose.

Q. Much too large a dose, Sir; much too violent; one grain of gamboge is quite enough for a dose.

The newly initiated, on comparing notes together on the following morning, chuckled

over the very edifying and enlivening fact, that *two* others of their number had, on the previous night, been asked the same question by *three* different Examiners. One of the Examiners advised more than three grains, saying that three grains was much too small and insignificant a dose. With *him*, ten grains were much better; whilst the third was told that *three* grains would do very well. Perhaps Mr. Morison should be called in to state the precise quantity of gamboge that enters into his pill No. 2, and thus settle the difference of opinion, for it is evident that, led by theoretic notions, the young aspirants for success at the Hall need to study, as they often do, the peculiar whimsies of this and that Examiner on various things besides gambogia, in order to conciliate the good opinion of their self-confident and surly censors.

Uniformity of practice—a standard metre for bloodletting—is also a great desideratum with some of them. A youth, after having described the symptoms of peritonitis, and the treatment, when first called in, by venesection, and other means, was asked

When would you visit the patient again?

A. In five or six hours, Sir.

Q. Very well; and how much blood would you then draw?

A. The quantity at this second depletion would depend on the age, strength, and previous habits of my patient, on the violence of the disease, and on the stroke of the pulse while the blood was flowing.

Q. But how much blood would you take?

A. That, Sir, would depend on the case; perhaps 16 ounces.

Q. Aye, Sir, and what would you do besides?

A. I would give a dose of calomel and opium.

Q. How much of each?

A. Five grains of calomel and two of opium.

Q. And what would be your intention in that?

A. To relieve present pain, to procure sleep, to excite a new action.

Q. Why would you give opium with calomel?

A. For the reasons before stated, and because I do not think that the injury done to the nervous system could be allayed without it.

Q. What other object would you have in view?

A. To prevent the calomel from passing off by the bowels.

Q. Anything more? Your notions appear to be extremely fruitful?

A. I beg pardon, Sir; I do not know at what you aim.

Q. Suppose then, young man, you were to take five grains of calomel yourself, What would be its effect?

A. It would purge me.

Q. It would purge you, and so it would your patient, too, and all you give the opium for is to prevent tormina of the bowels.

How *clear* are that man's perceptions, who, seeing but little, views all in a circle. Here was a decision on the diversified action of opium, in a case of acute disease, as instructive as it was comprehensive. By line and by rule, then, opium acts; it relieves tormina, and that is all the consideration which is required for it.

A splenetic little man, with asthma, is much and frequently complained of, as being insufferably acrimonious on such important occasions for an expression of temper as the following:—

About a dozen prescriptions are laid before an unlucky lad, who loves plain dealing,—penned not *à la mode* Lewisian, but in such a scrawl as seems to say—"Read me, if you can." *Cochleare medium*, reads the youth. "No, Sir, that is not the word: read again." *Cochleare modicum.* "No, Sir, look at it again." (Uttered spitefully.) *Cochleare minimum.* "No, Sir, you are at fault, still."

"Indeed, Sir, 'tis written so badly that I cannot read it; it appears illegible to me." "You must read it, Sir!" "I cannot; only tell me the latinity of that word and I will translate."

"*Mediocre*, Sir,—*Cochleare mediocre!*" "Thank you, Sir, but I thought it was *medium*,—more elegant."

"It is not for *you* to think about it, Sir!"

Gentle reader! Did'st ever before hear of the *mediocrity of a spoon?* Mediocrity of talent we have known, and often hear of, at this our Mediocrity-Hall.

Another young gent, excited beyond endurance by a succession of trivial queries, was asked "What dose of antimonials would you exhibit?"—"Oh, Sir, from three grains to a shovelfull." After some little explanation he did very well. Just so happily escaped another, who, at the College, was asked the standing question of one of the learned men of that junta. "What quadruped alone has no gall-bladder?"—"A horse, Sir," was the reply; but here both the learned Examiner and the examined were in error, as the elephant is minus that cyst also. I am, Sir, yours, &c.

SURGICUS.

London, May 23rd, 1838.

MR. EAGLAND'S PAPER ON CLUB-FOOT.

To the Editor of THE LANCET.

SIR:—In the communication which you did me the honour to insert in your valuable Journal of the 19th instant, "On mechanical cure of club-foot," an hiatus occurs which not only omits the inferences I meant to convey, but renders the context ambi-

guous as it does not clearly appear in what it is that "I am supported by the experience of Mr. Chapman," &c. What I meant to convey to the professional reader was, as near as my memory serves me, as follows: "That as the mechanical means made use of, and therein described, had proved so effectual as the sole agent in producing a radical cure, there was every reason to conclude that it would be found to be the most powerful auxiliary yet devised as a mechanical aid after division of the tendons," which position Mr. Chapman's experience fully confirmed. As the omission appears to me to be most important to the sense and right understanding of the matter, I have taken the liberty of pointing it out to you, in the hope that you will add to the obligation I am under to you by remedying the error. I am, Sir, your truly obliged servant,

CHARLES EAGLAND.

11, Bulstrode-street, Manchester-square, May 24th, 1838.

MEDICAL CONTRACT SYSTEM AT EDMONTON.

To the Editor of THE LANCET.

SIR:—In THE LANCET of the 12th inst., is a circular on the medical contract system, accompanied by a letter from Mr. J. Watkins, wherein he states, that he was requested by the medical officers (not the general practitioners) of the Edmonton and adjoining unions, to procure its insertion in your periodical.

The circular gives an incorrect version of the proceedings. Instead of a meeting of general practitioners, "held at the Angel Inn, Edmonton, on the 19th of April," therein described, it was merely a meeting consisting of four or five of the medical contractors of the Union, who, very disinterestedly, agreed to petition Parliament, praying an alteration in the obnoxious system of medical contract, which they, as contractors, especially support. I can assure you, Sir, the medical practitioners in the immediate neighbourhood were utterly ignorant of the, so called, general meeting, until the petition was sent round for signature; had a general meeting been convened, the feelings and views of the profession would, I doubt not, have been very differently expressed. I am, Sir, your obedient servant,

VERITAS.

Edmonton, May 22nd, 1838.

BRONCHITIS.—When the sub-crepitant rale accompanies acute pulmonary catarrh, it commences at the base of the lungs, that is to say, at a point opposite to the primary seat of tubercle.—*Louis.*

HOPITAL DE LA PITIE.

COLICA PICTONUM, TREATED SUCCESSFULLY BY PURGATIVES.—OBSTINATE GASTRALGY AND CEPHALALGY.

A LABOURER, ætat. 52, of a good constitution, but of very irregular habits, having committed all kinds of excesses, was seized, in the month of February, with intolerable pain in the head; the cephalalgy was general, but was not accompanied with vertigo, or tingling in the ear, or with weakness, or pains in the limbs; the eyes were a little intolerant of light. Numerous bleedings were practised, derivatives, cutaneous revulsives were applied in vain; the stomach was also the seat of violent pain, which was a little relived when the cephalalgy was exasperated. After some months stay at Bicêtre, the patient, finding himself sufficiently relieved to recommence his occupation, went to work at a manufacture of white lead; there he contracted, for the third time, the colic of lead, which brought him to the above hospital. When he entered, he complained of cephalalgy, violent pains at the epigastric and umbilical regions, not increasing upon pressure, constipated five days; bilious vomiting, tongue white, anorexy; pulse 72.

Castor oil, two ounces;
Decoc. of senna, eight ounces;
Sulph. of soda, one ounce. Make an enema. Diet.

2nd Day. A marked amendment after eight abundant evacuations; the pain about the umbilicus has nearly disappeared, but that at the epigastric region seems increased.

Barley water, an emollient enema, and a cup of beef soup.

3rd Day. No pain in the belly; the patient has slept a part of the night, which he had not done since the invasion of the colic; the appetite returns; three stools without pain.

Thirty leeches to the epigastrium, and an emollient cataplasm.

4th Day. The local bleeding has not modified the gastric affection, which still persists, and to combat which narcotics are to be tried.

Acetate of morphia, grs. ¼.
Extract of lettuce, vi. grs. Make three pills, to be taken during the day.

This treatment was continued for several days, at the same time a purgative enema to combat the constipation, which has again manifested itself. Still no change, no sleep; the preparations of morphine appear to excite rather than to calm him. The morphine was then changed for extract hyosciamus, in pills, associated with thridace. Under the influence of this medicine the epigastric pains diminish in intensity, but the cephalalgy is exasperated anew.

10th Day. There is much fever. Bleeding from the arm, and a mustard foot-bath. The entire body becomes painful; there are contusive pains in the legs and loins. A simple bath is ordered, which the patient could not support; he feels, when in the bath, as if squeezed between two presses; in fine, a blister is applied to the epigastrium; the patient, finding himself relieved, leaves the hospital after a month's sojourn; but very soon after he returns for the pains in the head and stomach. To combat these, the sub-nitrate of bismuth is tried, which had not yet been employed, but the patient could not support it at any dose. The oxide of zinc, and many other medicines reputed anti-spasmodic, have been tried in vain. In this state he left the hospital.

PENETRATING WOUND OF THE CHEST.—HÆMORRHAGE.—DEATH.—AUTOPSY.

On the 14th of January, a serjeant of the 24th Regiment was brought to La Pitié, having received a sword wound in a duel. The arm that made the wound had a long, narrow, flat blade, double-edged; it penetrated above the right breast, four inches from the edge of the sternum, took an oblique course in the thickness of the thoracic wall, and penetrated into the cavity (right) of the thorax through the fourth intercostal space, six lines from the edge of the sternum. The man arrived at the hospital at seven P.M., an hour after the receipt of the wound. He breathed with difficulty, the inspirations were frequent and incomplete. In the act of expiration, the skin was raised in front of the internal orifice of the wound by jets of blood coming from within. This liquid escaped mixed with large bubbles of air. The inferior half of the right thoracic cavity gave a dull sound on percussion; the pulse was concentrated. The wounded man was in extreme agitation. By the exact reunion of the lips of the wound it was hoped that a coagulum may be formed, but the respiration soon became more difficult.

15. Extreme anxiety; the patient could not remain in the horizontal position; the right cavity of the thorax, evidently dilated, gave a dull sound in its entire extent, and remained fixed in the act of respiration; suffocation was imminent; the skin pale, was covered with cold sweat; the patient had several syncopes; the pulse was weak. The first idea was to give issue to the blood contained in the chest. A large incision laid bare the course of the wound from its extern to its intern orifice. This incision gave issue to a considerable quantity of blood, partly coagulated, and the patient was relieved. Notwithstanding after the issue of the black blood, the wound still continued to give liquid red blood; the patient had several swoonings; it was evident that the hæmorrhage continued.

The patient died on the 16th, and the autopsy showed that the mammary artery had been opened at its posterior part, but not completely divided; that the lung had been pierced at its anterior edge; that the sword had penetrated into the pericardium, and slightly scaled the superior part of the anterior wall of the right ventricle of the heart. The pericardium contained a small quantity of bloody serosity; a considerable quantity of blood was found in the right cavity of the chest; no trace of inflammation either of the pleura or of the parenchyma of the lungs, the heart, or pericardium.

ELECTRICITY A CURE FOR TETANUS.

M. Matteucci, one of the first natural philosophers of the day, has applied electricity to the cure of tetanus with a success which, if further experience shall confirm it, affords a hope of our being able to alleviate, if not master, one of the most intractable of diseases.

In a letter addressed to the Institute of France M. Matteucci observes, "That every natural philosopher who has made any experiments relative to the passage of electric currents through the limbs of a frog, must have remarked that the animal is seized with a kind of tetanic convulsion, during which the limbs become rigid and inflexible. Volta, however, remarked, that by passing the current of electricity continuously and in the same sense, the contractions soon cease altogether. Setting out upon this principle M. Matteucci endeavoured to apply it to the cure of tetanus, and discover how far the direction of the current, and the mode of introducing it, might not influence the muscular contractions. His first experiments were made upon frogs, and from these he concluded that the most advantageous method was that of introducing the current in such a way as to determine at first the least possible contraction; he also found the tetanic state most readily overcome by an inverse current. Having completed his experiments on animals M. Matteucci looked forward with anxiety to the time when he could apply the results to the human subject. An opportunity was at length offered by Dr. Farina, of Ravenna, who was called to attend a patient affected with tetanus, brought on by a gun-shot wound. The case was an unfavourable one as the muscles and tendons of the leg contained a great number of grains of shot, the exciting cause of the tetanus being thus constantly in operation; the remedy, besides, was not applied until ten days after the receipt of the wound,

and at the very height of the disease. The machine employed contained from 25 to 35 plates; the electric current was passed along the spinal marrow, from below upwards, for half an hour, without interruption; it was repeated six times during the two days that the man lived. The moment the electric current was established the man became calm, to the surprise of the numerous physicians surrounding him; his muscles became relaxed; the skin was covered with moisture, and the circulation became tranquil. Such, indeed, was the effect produced, that the patient constantly cried out for the electric pile. Unfortunately, M. Matteucci was confined to bed by a broken leg, and unable to direct the necessary operations; the persons to whom they were intrusted could not keep up the electric current even though the pile was renewed; the good effects, however, produced in this case were so manifest that M. Matteucci looks forward with confidence to the result of a future trial.—*French Gazette*, May 19, 1838.

SECTION OF THE CLEIDO-MASTOID MUSCLE FOR TORTICOLLIS.

By M. J. Guerin.

The last Number (17) of the "French Medical Gazette" contains an interesting memoir by the Editor, M. Jules Guerin, on section of the sterno-cleido-mastoid muscle in cases of torticollis. M. Guerin relates two cases in which the operation was attended with complete success:—

In the first, that of a young person, 19 years of age, after having tried extension by mechanical means for two months, without success, M. Guerin proceeded to operate in the following manner:—Having raised a fold of skin, parallel to the muscle, the operator introduced a bistoury (the flat side being turned to the skin) underneath the muscle, and divided the latter with facility, thus imitating the well-known operation for club-foot. The division of the sterno-cleido-mastoid was followed by an audible cracking sound. The small wound, made in the skin, was covered with a bit of dyachylon, and on the third day the machinery, formerly employed without success, was applied. On the sixth day, some slight resistance of the divided muscle was experienced, and this became more sensible on the eighth day. On the eleventh day the position of the head was perfectly straight, but the cervical region still remained evidently inclined on the dorsal. The treatment ordinarily employed in such cases, was now continued for two months, at the expiration of which the patient was perfectly cured. It should be mentioned, but, in this case, the description of which we have considerably abridged, the torticollis was carried to the very highest degree. The second case was every way analogous to the former one. A cure was obtained in thirty-four days.

MICROSCOPIC OBSERVATION OF THE VACCINE VIRUS.

M. Dubois, of Amiens, a physician of celebrity in France, has lately made some researches with the microscope on the nature of the vaccine virus, from which he derives the following conclusions:—

1. The virus, whether in the liquid or dried state, presents no appearance of globules or animalculæ.

2. When recently extracted from the pustule it is remarkably fluid and transparent, but by degrees loses its form and becomes, as it were, crystallised.

3. When dried we find in the virus two orders of deposit, one composed of long opaque filaments, the other which presents a species of net-work of the most extreme tenuity.

4. These latter, which essentially belong to the true vaccine matter, exist in every case with a perfectly identical appearance, and whenever they ceased to exist the matter was found to have lost its contagious properties.

5. An examination of the vaccine matter with the microscope enables us to determine the existence or the non-existence of its preservative powers.—*Bullet. of the Royal Acad. of Medecine*, April, 1838.

BRITISH MEDICAL ASSOCIATION.

May 22nd, 1838.

The minutes of the last meeting having been read and confirmed the following gentleman was admitted a member of the Association,—Dr. Kinnier, East-road, City-road.

In consequence of not having heard from Mr. Warburton respecting the publication of the remainder of the Evidence on the Medical Education Bill, it was unanimously resolved,—That a deputation do wait upon Lord John Russell in furtherance of the same object.

The following gentlemen were named as the deputation:—Dr. Webster, President; E. Evans, Esq.; R. Davidson, Esq.; M. W. Hilles, Esq.; W. Farr, Esq.

Mr. Crisp moved, and Mr. Farr seconded the motion, which was carried unanimously, —That the Report of the Poor-Law Committee on the subject of better medical attendance on the poor and remuneration of parochial medical officers be left in the hands of the President to make such alterations as he might deem necessary preparatory to its being printed. The meeting then adjourned.

SUCCESSFUL OPERATION FOR LITHOTRIPSY IN A CHILD FOUR YEARS OF AGE.

By J. RANDOLPH, *M.D., Surgeon.*

THE patient was a female child four years old. Previous to the operation the sound was introduced several times to accustom the urethra to the presence of instruments.

January 18. Jacobson's small-sized instrument was introduced, but found to expand beyond the stone.

22. Heurteloup's instrument of the largest size was then used, and the stone was immediately twice seized and crushed. After the operation several large fragments of a soft stone were passed, which proved to be the phosphate of lime. Little inconvenience was experienced by the patient, except that occasionally the passage of a fragment through the urethra gave the little girl pain enough to make her complain, never, however, sufficient to confine her to bed. The hip-bath was ordered for the relief of pain when it occurred. Since the stone was broken she retained her water longer and suffered much less pain than previously.

28. The stone was caught three times today, the instrument expanding one and a half inches upon embracing it. A slight discharge of blood followed the removal of the instrument.

Feb. 8. The girl suffered for an hour severe pain in passing her urine. Hip-bath.

11. The stone was caught three times.

18. Caught four times. A large sound was introduced to dilate the urethra.

25. Caught four times.

26. Passed nearly a teaspoonful of very small fragments since yesterday.

March 3. Caught four times.

14. Passed several fragments since the last operation. Sounded by Drs. Harris, Norris, and Randolph, who agreed that no stone could be felt. The child has not been at any time confined to bed, since the first operation, and has gone daily into the open air during the fine weather, and has enjoyed throughout perfectly good general health. There were eight sittings in all, and at no time did the operation occupy more than two minutes, giving the child, as she said, very little pain. Dr. Randolph operated at intervals of a week, in order to guard against any possibility of cystitis supervening.—*Philadel. Med. Examiner*, March, 1838.

A CORRESPONDENT from Bristol, referring to the suicide of Mr. Caswell, remarks, that it is too much of a piece with the treatment experienced by the medical officers of the Unions in this district, and adds an instance in confirmation, which occurred a few days ago at a board of guardians a few miles from that city. The Union was divided originally, two years ago, into four medical districts. Last Monday three additional medical men were introduced, dividing the Union into six districts, and appointing a medical officer to the new workhouse. One of the guardians asked if it was right to divide the allotments of medical gentlemen, two of whom, at least, had never had a whisper of complaint preferred against them, without the courtesy which gentlemen deserved of being, if not consulted, at least apprised, of the intended alterations, when he was instantly met by the reply, "We must do the best we can for the parishes," and thus are members of a liberal profession made to feel that they are indeed the *servants* of the public.

BOOKS RECEIVED.

Physiologisch-Pathologische Untersuchungen, &c.—Physiological and Pathological Researches on Pus, Suppuration, &c. By Dr. Julius Vogel. Erlangen, 1830. Palm and Enke.

Medicinische Unterhaltungs-blatter, &c. —The Medical Scrap-book, No. 1, with a portrait of Paracelsus. Leipzig, 1838. Engelmann.

Die Heilquellin Deutschland, und der Schweiz, &c.—The Mineral Waters of Germany and Switzerland. By Dr. K. C. Hille. Leipzig, 1838.—[A concise but interesting description of the most celebrated mineral sources in Germany and Switzerland.]

TO CORRESPONDENTS.

Studio. We consider Edinburgh the better school for medicine, and Dublin the better one for surgery. The examinations for a medical degree at Trinity College, Dublin, and at the College of Physicians are by no means difficult.

A Pupil of Dr. Wilks. We do not regard the circumstance mentioned by "A Pupil" of sufficient importance to deserve notice.

We regret that the arrangements of our printer have rendered it necessary for us to defer until next week the insertion of *Mr. Phelan's* letter in answer to the circular of the surgeons of the Irish County Infirmaries.

Observer should send us facts, and not speculative reflections.

The communication of *A Retired Surgeon* is not suited to the pages of our Journal, either in its form or matter. It is not even addressed to the Editor.

ERRATUM.—In the last Number, p. 307, line 34, col. 1, instead of "The sum for the seamen," &c., read—*The sum of the numbers of seamen, marines, and boys voted in the* 11 *years* 1816-29 *was* 361,000, *&c.*